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ABSTRACT

An evaluation of the costs of serving handicapped children in Head Start was based on information collected in conjunction with on-site visits to regular Head Start programs, experimental programs, and specially selected model preschool programs, and from questionnaires completed by 1,353 grantees and delegate agencies of regular Head Start programs. Data regarding current and projected expenditures were obtained from sources such as existing budget and financial reports, and interviews with personnel involved in cost accounting. Among major conclusions of the study were that existing accounting practices in Head Start agencies fall far short of permitting complete and accurate documentation of the true costs of serving handicapped children; that estimates suggest that the cost of serving those handicapped children now enrolled (primarily the mildly handicapped) is only slightly more than that for serving any other typical Head Start child; but that the cost of serving severely handicapped children would be significantly greater than for the typical child. Recommendations included the need for a cost accounting procedure which provides for the recording of documented direct costs and an established pro-ration of indirect costs, utilizing programmatic budget procedures; and for the allocation of extra funds for the handicapped to be based on services rendered rather than on numbers of identified children enrolled. (LS)

FINAL REPORT

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AN ANALYSIS OF METHODS AND COST ESTIMATES

Prepared by:

Division of Special Education and Rehabilitation

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Submitted to:

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CHAPTER I

PURPOSES OF TASK IV

Introduction

The Economic Opportunity Act Amendments of 1972 mandate that "not less than 10 per centum of the total number of enrollment opportunities in the Nation in the Head Start program shall be available for handicapped children . . . and that services shall be provided to meet their special needs." Among several questions and problems raised by that mandate was the ever present issue of cost, i.e., "Does the mandate have financial implications and how will such implications be implemented?" Adding to the cogency of the financial issue was the fact that no special appropriation of funds accompanied the Congressional Act.

The many unanswered questions about financial implications of the mandate were reflected in a Request for Proposals, issued by the Office of Child Development for an Evaluation of the Handicapped Effort in the Head Start Program. One major task of that evaluation study involved the development of methods of estimating cost of

services to handicapped children in Head Start; identification of key cost variables; and preliminary cost estimates, including the contribution of the preparation of services from other groups and agencies. This requirement, designated as Task IV of the total evaluation project, had the basic purpose of providing better cost information for future planning by the Office of Child Development for the handicapped effort in Head Start.

It is the purpose of this report to describe the present status of cost studies having to do with the delivery of services to the handicapped, the relevance and applicability of such information to the unanswered questions regarding Head Start, the method by which we attempted to seek information, utilizing a variety of approaches, the findings which generated from this method, the interpretations which we believe can be drawn, and some conclusions and recommendations thought to be useful for planning and future policy formulation.

Background to the Problem

While equal educational opportunity has always been a tenet of the American educational system, educators have

typically excluded the handicapped from this provision. Until the courts upheld the basic rights to education (Brown versus Board of Education, 1954), the handicapped have had to make do with the inherent inequalities of the educational system. Further court developments (Mills versus Board of Education, 1972) not only reinforced the right to an education but decreed that specific educational programs must be designed to meet the specific needs of each child.

On September 19, 1972, the Economic Opportunity Amendments of 1972 became law and quantified the provision of equal educational opportunity for handicapped children in Head Start programs throughout the United States. For the first time in federal history, concerning education of the handicapped, considerations of both quantity and quality were written into law. Not less than 10 percent of the total Head Start enrollment was made available to the handicapped with the additional provision that services be provided to meet their special needs. In addition to the 10 percent mandate to educate handicapped children within the mainstream of Head Start was the provision of an annual report to the Congress containing cost considerations. This

reinforced statements by the National Legislative Conference Committee on School Finance about the concept of equal educational opportunities and the potential differences in cost, and variations in interests and needs of those to be educated (Morley, et al., 1972).

In response to the Congressional mandate to report on the status of handicapped children in Head Start, the assessment of resource configurations and cost has become an important issue.

Status of Cost Studies

Historically, educators--including special educators--have been reluctant to deal with cost considerations. At least in part, some of this resistance has come from the apparent magnitude of excess costs of providing special educational programs and services for the more severely handicapped.

Nevertheless, the combination of mandates and funding shortages, together with the obvious costs of educating the handicapped, has placed considerable pressure on educators to identify costs related to the education of handicapped children. Confounding the problem is the paucity of research

on methodology that is conducive to analyses.

One major factor that has accounted for the renewed interest in both fiscal and programmatic accountability is the growing federal involvement in educational programs for the handicapped. More recently, responsible individuals at the federal, state, and local levels have begun to recognize that costs of educational services are related to the specific needs of handicapped children. Little is yet known concerning the specifics of such provisions. Unfortunately, the financing of educational programs and services for the handicapped has been based on vague assumptions and humanistic values rather than on empirical facts. However, with the rising cost of education, rising expectations for education, criticisms of educational shortcomings, expanding federal involvement, and the fact that more money alone may not be the answer to improved education, Congressional leaders are joining in the demand for greater accountability.

In order to account for present costs and to project future costs in the Head Start handicapped effort, it may be useful to draw upon pertinent research endeavors on special education costs in the public education sector which may be generalizable to the Head Start program.

Research in Public Education

The study of costs in special education has depended upon the measurement of items identified as expenditures. While it is recognized that the concept of cost is broader than this, researchers have been unable to agree upon the operational definition of cost and thus have further confounded the issue. However, recent cost analysis studies in special education have become cognizant of the dysfunctional nature of past research endeavors and are attempting to rectify the situation.

Research studies related to the analysis of special education costs can be classified into those dealing with the incidence of exceptionalities, those dealing with the special education programs for various categories of exceptional children, those dealing with state and federal financial support of programs for exceptional children, and those dealing with comparative cost studies between general and special education (Rossmiller, et al., 1970, p. 23).

In the past, research studies relating to the incidence of exceptionalities, educational programs for various categories of exceptional children, and financing programs for

exceptional children produced results that often were incomplete, contradictory, confusing, and only speculative in nature. Recent efforts at the local, state, and federal level have alleviated some of the inherent inadequacies in these studies; but the results will not be discussed at this point in time in lieu of the more pertinent cost studies, in general, and special education, in particular.

The majority of cost studies in general education have been of the cost-effectiveness type. Until the early 1900's, cost-effectiveness studies in the field of education were relatively unknown. At first, the cost-effectiveness aspects of these financial surveys were incidental. From 1920 to 1950, school finance experts, led by Paul Mort, cited study after study in order to strengthen the presumptive relationship between cost and effectiveness. However, a definitive relationship was never identified.

Subsequent research went beyond the assumption that higher achievement was a function of the amount of dollars spent. The importance of the socio-economic background of students began to influence the cost-effectiveness studies after the late 1950's.

Measures of quality or effectiveness abound in general education, most of which are not amenable to quantitative analysis. However, measures of cost have been generally accepted by school finance experts as the expenditure level, usually expressed in terms of cost per pupil.

Utilizing the cost analysis foundation prepared by general educators, cost analysis studies in special education have been limited to cost characteristics based upon clinical labels of handicapped children (Conference Paper, 1971; Colella & Cohen, 1971; Orr, 1971; Rossmiller, et al., 1970; Greenspan & Grasberger, 1969· California State Department of Education, 1967).

The majority of these studies were conducted within individual states with the exception of the Rossmiller study, the pioneering effort concerning resource configurations and costs in educational programs for exceptional children conducted for the National Educational Finance Project (NEFP).

The Rossmiller study sought to achieve three major objectives through an analysis of a nationwide sample of 24 school districts regarded by experts as providing high quality and reasonably comprehensive educational programs for exceptional

children in order to:

(a) Establish the relative cost indices and differentials of the various exceptional child programs compared with general education programs;

(b) Ascertain those components, elements, and conditions which seemed to have the most pronounced effect on exceptional program costs and cost differentials; and

(c) Determine the criteria employed in identifying the various categories of exceptional children and obtain an estimate of the prevalence of each category of exceptionality in the total population of school children. The study resulted in the establishment of cost indices which related the cost of 10 categories of exceptionality with general educational costs (Frohreich, 1973, pp. 517-518).

Utilizing the median school district in each category of exceptionality, cost indices[1] ranged from a low of 1.14 for the intellectually gifted to a high of 3.64 for the physically handicapped (Rossmiller, et al., 1970, p. 114). These indices were the following:

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[1]The foundation cost indice of 1.0 corresponds to the amount a district is spending per pupil in its general education program for elementary and secondary pupils.

Intellectually Gifted----------1.14
Speech Handicapped----------1.18
Educable Mentally Retarded----------1.87
Trainable Mentally Retarded----------2.10
Special Learning Disorders----------2.16
Multiple Handicapped----------2.73
Emotionally Disturbed----------2.83
Visually Handicapped----------2.97
Auditorily Handicapp----------2.99
Physically Handicapp----------3.64

While the Rossmiller study represented the first major attempt to identify resource configurations and costs in educational programs for exceptional children, many critics have consistently cited methodological flaws and the questionable value of the results in terms of planning a continuum of educational service delivery systems.

The major limitations of the Rossmiller study can be characterized as:

(a) Lack of cost-quality data;

(b) An inadequate sampling procedure; and

(c) The collection of data and organization of the report based entirely on clinical disability categories of pupils (Gc tel & Sage, 1973.

More specifically, these limitations, which are relevant to the problems of cost in Head Start, may be described as follows. The President's Commission on School Finance (1971) stressed the importance of developing evaluation systems to measure the effectiveness of educational programs, since educators have concentrated too long on the resources going into schools and giving only minimum attention to the outcomes. Further, James and Cronin (1967) underscore the importance of developing improved rationality in decision-making about school expenditures through continued research on the relationship of resource inputs to educational outcomes.

Guthrie (1971) states that as competition for scarce resources increases, it is the responsibility of educators to specify the effect of those resources since it will become increasingly difficult to obtain additional funds unless we can make a cost-effectiveness case for them. Unfortunately, the Rossmiller study never purported to deal with that aspect.

A second limitation of the Rossmiller study concerns the questionable sampling procedure. Experts in the field of exceptional child education identified a sample of states providing quality special education programs, and within the five states selected, identified a sample of 24 school

districts in accordance with certain criteria, i.e., the comprehensive nature and quality of their special education programs and services.

Not only did the sampling procedure raise questions as to the representative nature of the exemplary school districts; there was no way of determining the degree to which qualitative differences existed among the 24 districts nor the degree of similarity or difference between that exemplary sample and other school districts (Goettel & Sage, 1973).

The third and most important limitation concerns the fact that the collection of data and organization of the report was entirely based on clinical disability categories of pupils. All the cost data were reported as if disability labels were the major determinants of program cost, and carried direct correspondence to particular educational services. While it could be anticipated, prior to the examination of data, that any given label could be associated with a wide variety of educational needs, and therefore costs, the results of the cost data in the 24 systems clearly demonstrated that the clinical label is a highly variable

and unsatisfactory basis for describing need or associating it with cost (Goettel & Sage, 1973).

Throughout the Rossmiller study, a wide range of cost index variance was reported within the large majority of disability categories. Obviously, this was a function of the severity of the handicapping condition and/or the intensity of educational service provided. However, no attempt was made to delineate either the degree of severity of the handicapping condition or the intensity of service provided with the concomitant resource configurations and cost.

Even with all its limitations, however, the Rossmiller study provided special educators with a viable reference point from which to analyze programs in terms of cost and cost-quality issues. The data have raised many legitimate questions, but there are some basic factors and relationships that the Rossmiller study and similar studies have identified that appear to be relevant to other educational programs enrolling handicapped children.

Relevance of the Rossmiller Study to Head Start

Rossmiller and his colleagues (1970) identified several expenditure categories that are relevant to both special and general education programs. These are:

(a) Management
    - Administration
    - Clerical & Secretarial

(b) Instruction
    - Teachers
    - Teacher Aides

(c) Instructional Support
    - Supplies & Equipment
    - Guidance & Counseling
    - Other (including specialized personnel)

(d) Institutional Operations
    - Operation & Maintenance
    - Fringe Benefits
    - Other

(e) Services
    - Health
    - Food

(f) Transportation

While a wide variance in cost indices was consistently reported among and within the 10 categories of exceptionality, there appear to be certain expenditure categories that contribute

most to the cost differential between exceptional child programs and general programs. However, prior to discussing this issue, it will be beneficial to indicate specific expenditure categories that have had the most impact upon specific categories of exceptionality within the sampled school districts. It will suffice for the purpose of this review, to describe only a few of the categories in which cost indices were computed, to demonstrate the breadth of variance found.

A sample of 22 school districts was identified to determine the per pupil cost indices of programs for the educable mentally retarded. Cost indices were reported as follows:

Highest	Median	Lowest
3.21	1.87	1.14

Close scrutiny of expenditure accounts reveals the highest expenditure school district's propensity to allocate more funds across each of the expenditure categories, i.e., more program supervision, more clerical support to accommodate increased volume of paper work necessitated by individual case studies and processing, lower pupil-teacher ratios, more supplies and equipment, more psychological services and

curriculum programming, more space per pupil and consequently more operational and maintenance costs, more health services and more comprehensive transportation policies (Rossmiller et al., 1970, p. 66).

Although the highest expenditure school district provided only a portion of its instruction in self-contained classrooms, it is highly probable that districts reporting high expenditures in the program for the educable mentally retarded utilize more segregative service delivery systems, thus generating a parallel school system rather than utilizing more generic services in the mainstream of education which would decrease expenditures accordingly.

A sample of 22 school districts was identified to determine the per pupil cost indices of programs for the trainable mentally retarded. Cost indices reported among the selected school districts were:

Highest	Median	Lowest
3.62	2.10	1.18

Again, the pupil-teacher ratio contributed significantly to the increased cost for teachers in the highest expenditure school district, while the median expenditure school district appears to have traded-off expensive

professionals for paraprofessional aides and supplies and equipment. Substantial variance is also indicated in the "other" Instructional Support category as a function of increased curriculum and psychological services and in health and transportation services (Rossmiller et al., 1970, p. 69).

A sample of 18 school districts was identified to determine the per pupil cost of programs for the auditorily handicapped. Cost indices were reported as follows:

Highest	Median	Lowest
5.88	2.99	1.05

The principal cost variances of the lowest cost index district were evident in the areas of instructional supplies and equipment, transportation and teacher salaries, mainly as a result of lower pupil-teacher ratios. The variances were quite distinct in the highest cost index district and were dramatically different from those for the lowest cost index district. The lower pupil-teacher ratio, use of teacher aides and other instructional support personnel, e.g., curriculum specialists, psychologists, audiometrists, and higher expenditures for administrative and supervisory personnel account for the bulk of the difference between the

highest and lowest cost index district (Rossmiller et al., 1970, p. 75).

A sample of 17 school districts was identified to determine the per pupil cost indices of programs for the visually handicapped. Cost indices reported among school districts were:

Highest	Median	Lowest
11.45	2.97	1.05

The highest cost index district spent more per pupil for administration and supervision alone than the lowest cost index district reported spending for its entire program. The per pupil expenditure for teacher salaries alone, reported by the highest expenditure school district was greater than the overall expenditure reported by 16 other districts. Obviously, the high expenditure for teacher salaries is a result of an unusually low teacher-pupil ratio (1:1.8). For the most part, the high cost indices resulted from a small program enrollment in the highest cost index school district. However, the organizational structure for providing educational programs for the visually impaired reflects a dedication to provide individualized services which is manifested in the 1:1.8 teacher-pupil ratio (Rossmiller et al., 1970, p. 81).

A sample of 15 school districts was identified to determine the per pupil cost indices of programs for the physically handicapped. Cost indices reported among school districts were:

Highest	Median	Lowest
4.64	3.64	1.52

The expenditure for teacher aides in the high cost index district could not be contrasted with the regular program cost because no teacher aides were reported for the regular program. Both the high and low expenditure school districts reported the same enrollment. While elementary and secondary enrollments differed somewhat, the differences in cost indices indicate that the practice of integrating those pupils into the regular program provides economic benefits as well as contributing to the socialization intent of the integration commitment (Rossmiller et al., 1970, p. 84).

A sample of 21 school districts was identified to determine the per pupil cost indices of programs for the speech handicapped. Cost indices reported among school districts were:

Highest	Median	Lowest
2.12	1.18	1.09

Unlike the other programs for exceptional children previously discussed, the expenditure for teacher salaries for speech therapy does not vary significantly from the regular program. However, the expenditure for other Instructional Support, e.g., psychologists, speech therapists, does vary significantly from the regular program and also varies considerably among the high, median, and low cost index programs. Further, it appears that expenditures for health services and instructional supplies and equipment account for the major remaining expenditure differences among the programs contrasted (Rossmiller, 1970, p. 90).

A sample of 20 school districts was identified to determine the per pupil cost indices of programs for specific learning disorders. Cost indices reported among school districts were:

Highest	Median	Lowest
5.20	2.16	1.40

The teacher-pupil ratio of the high cost index district contributed significantly to the expenditure variance in teacher salaries. Also, small classes utilizing regular classroom space probably accounts for the variance in other

expenditure categories including operation and maintenance costs. Further, much of the variance in administrative cost may be attributed to the fact that the functional cost is spread over enrollments of varying size. Also, the high expenditures in other Instructional Support for the highest and median expenditure school districts is a function of the salaries of psychologists, curriculum specialists, and other specialized service personnel involved in the special program (Rossmiller et al., 1970, p. 95).

A sample of 14 school districts was identified to determine the per pupil cost indices of programs for the emotionally disturbed. Cost indices reported among school districts were:

Highest	Median	Lowest
11.64	2.83	1.58

The teacher-pupil ratio of 1:2.7 reported for the high cost index district contributes significantly to the variance in teacher salaries between the high expenditure district's special and regular program and the between-district variance for the special program. The variance in administrative cost between districts is associated with the differences in program enrollments, as is the variance in

expenditures for other Instructional Support, i.e., psychologists and other specialists. Since variances in operation and maintenance costs are a function of the number of square feet allocated per pupil, a large space allocation is often the result of small class enrollments in a special program using classrooms of regular size. This appears to be the case in differentiating the costs among the highest, median, and lowest expenditure school districts (Rossmiller et al., 1970, p. 100).

It is also apparent that the above school districts were serving a diverse population of pupils in terms of the degree of severity of the handicapping condition, and were providing services of widely varying degrees of intensity.

Throughout each of the categories of exceptionality reported by Rossmiller, it is clear that certain expenditure categories were identified as contributing the most to the cost differentials between exceptional child programs and regular programs.

A recent article by the Co-Investigator of the Rossmiller study (Frohreich, 1973, p. 520) presents a table illustrating each exceptional disability category in relationship to those expenditure categories which made a significant

impact on cost differences between the exceptional child programs and regular programs (see Table, p. 24).

From the analysis of data, Frohreich concluded that:

> The function of instruction represented the largest single component of expenditure for special education programs just as it did in programs for regular pupils. The cost of transporting some types of exceptional children was quite high. This was particularly true in the case of crippled children where especially equipped buses frequently were required. Instructional support expenditures were a major factor in districts that made extensive use of specialized personnel such as counselors, therapists, doctors, nurses, and psychologists in programs for exceptional children. The expenditure for institutional operations was related directly to class size. In most instances the classrooms observed were regular classrooms which had been converted for use in special education programs. A lower class size resulted in a larger square footage per pupil and thus increased the cost of operation and maintenance on a per pupil basis.

While the expenditure categories of instruction, instructional support, operation and maintenance, and transportation account for most of the cost differentials between exceptional child programs and regular programs, it is important to keep in mind that the collection of data and organization of the report were based entirely on clinical disability labels without concern for the degree of severity of the handicapping condition and the service delivery system utilized.

TABLE 1

EXPENDITURE CATEGORIES THAT CONTRIBUTED THE MOST TO COST DIFFERE
BETWEEN EXCEPTIONAL PROGRAMS AND REGULAR PROGRAMS

Category of exceptionality	Administration	Teachers	Supplies and equipment	Guidance and counseling	Other Instructional support[2]	Operation and maintenance
Intellectually gifted	X[1]	.....	.....	.....	.....	.....
Educable mentally retarded	X	X	.....	.....	X	X
Trainable mentally retarded	X	.....	X	.....	.....	X
Auditorily handicapped	X	X	X	.....	X	X
Visually handicapped	X	X	X	.....	.....	X
Physically handicapped	X	X	X	X	X	X
Speech handicapped	.....	.....	.....	.....	X	.....
Special learning disorders	X	X	X	X	X	X
Emotionally disturbed	X	X	X	.....	X	X
Multiply handicapped	X	X	.....	.....	X	X

[1] An X designates a cost differential of more than 1.25 times between the cost per pupil associated with an exceptional program and the expenditur pupil associated with the regular program in a majority of the programs

[2] Including specialized personnel

TABLE 1

TURE CATEGORIES THAT CONTRIBUTED THE MOST TO COST DIFFERENTIALS BETWEEN EXCEPTIONAL PROGRAMS AND REGULAR PROGRAMS

Adminis-tration	Teach-ers	Supplies and equip-ment	Guidance and counsel-ing	Other Instruc-tional support[2]	Operation and mainten-ance	Fringe benefits	Trans-por-tation
X[1]							
X	X			X	X		X
X		X			X	X	X
X	X	X		X	X	X	X
X	X	X			X		X
X	X	X	X	X	X		X
				X			
X	X	X	X	X	X		X
X	X	X		X	X	X	X
X	X			X	X	X	X

a cost differential of more than 1.25 times between the expenditure category associated with an exceptional program and the expenditure category cost per d with the regular program in a majority of the programs studied.

alized personnel

Subsequent publications by Rossmiller and Moran (1973) attempt to remedy this dilemma by elaborating upon the necessity to consider not only the different types of exceptional children served but also to consider the various service delivery systems provided for those children, in order to come to grips with the resource configurations and costs in educational programs for exceptional children.

It is highly probable that the Rossmiller study has identified important relationships between special and general education programs that may be generalizable to the Head Start effort. The remaining section of this report will speak to these issues.

Factors Bearing on Cost Determination

The problems inherent in determining consistent and dependable data on costs of services for the handicapped in public schools, can be presumed to be somewhat similar, and at least as complex when applied to Head Start programs. In attempting to draw relationships between the two settings, a number of factors must be considered.

Consistency of reporting procedures. One of the difficulties experienced by the researchers in the National

Educational Finance Project (Rossmiller et al., 1970) in attempting to arrive at nationally generalizable data was the variety of cost accounting procedures to be found among the several state public school systems. While a general similarity in procedures exists as a matter of professional practice, different requirements of different state financial support systems, and the fact that public education is a state, rather than federal function causes some problems in translation, when comparing or grouping inter-state data.

In contrast, the accounting procedures for Head Start are set by the federal-level offices. While the demands of the system are relatively simple, and therefore provide only a skeleton for a local agency's accounting procedure, the federal forms for budget preparation and for quarterly and annual financial statements carry standardized categories and line items. These would provide reasonable assurance of consistency among all Head Start programs, as far as major classifications of expenditures are concerned.

Sophistication of accounting personnel. The advantages of nationwide consistency of format, however, may be offset by the fact that Head Start programs, and in many cases the organizations which administer them, are newcomers to the scene

of public service delivery. It can be assumed that in many cases the personnel responsible for keeping the books will not be as "established," as is the case in public schools, and that procedures, therefore, will not be stabilized by long history of practice. In addition, the lack of stringent, detailed directions to the accounting personnel, except for that broad structure of the standard forms, can be expected to result in a fair degree of "local interpretation" and, therefore, variance in the way specific cost items may be classified.

Use of categorical accounting. Previous studies of public school special education costs have been facilitated somewhat by the fact that in many states, the formula for providing state support to the local school system was dependent upon the identification of actual "excess costs" for the education of the handicapped. Such "earmarked funding" systems require the maintenance of accounts which permit the documentation of direct expenditures associated with providing special educational services as well as the valid pro-ration of costs that are not direct. In organizations where categorization has been a necessity, the procedures for accomplishing it have become well established.

In Head Start programs until the present time, there has been no requirement or incentive for developing an accounting system with sufficient complexity to permit the automatic or easy sorting-out of special categorical costs.

Sources of significant costs. Some differences in types of costs which are entailed in the total service delivery package can be anticipated between public schools, where previous cost studies have been made, and current Head Start programs. The focus of Head Start on very young children and the economically disadvantaged should be expected to place greater overall emphasis on some of the services, which would be classified as "ancillary" in the public school setting. Examples of this difference include food services, medical, psychological, and social services, particularly those associated with diagnostic activities.

On the other hand, certain costs associated with the provision of instructional materials, both consumable supplies and capital equipment which are crucial to the educational program for school-age children and which constitute a significant expense to programs for certain handicaps, would be much less central to the requirements of Head Start.

In the area of personnel costs, it also might be anticipated that a difference in the balance between professional and nonprofessional personnel would be found. The emphasis on credentialism in the public schools does not extend as heavily into Head Start or most other preschool service programs.

Multiple patterns of service. One problem in the determination of average excess per pupil costs within public school programs for the handicapped, which is most evident in the Rossmiller data, is the failure to take into consideration the large variety of service delivery constellations which are becoming prominent in increasing numbers of school systems. The extremely large variance in reported costs for certain handicaps in the Rossmiller study was no doubt partially the result of the inclusion of a broad continuum of service patterns, from low intensity services such as consultation, to high intensity services such as the complete range of direct instructional and ancillary supports of a special school. It is now clear that the determination of costs for special education in the public schools must be based on the particular patterns of service delivery utilized

as much as, if not more than, the clinical classification of the handicapped children involved.

In Head Start, there would appear to be fewer service delivery options to be accounted for in estimating costs. Special schools or special classes, exclusive to the handicapped, are not generally in evidence. The inclusion of the handicapped, at least the mildly handicapped, in an integrated fashion as a part of a regular group of children appears to be the norm. The models which are coming into increasing use in the public schools as a part of the grounds-well toward "maximum feasible normalization," the resource teacher, the diagnostic-prescriptive teacher, the consulting teacher, are not likely to be as differentiated nor as germaine within the Head Start setting. In this respect, the determination of excess costs for the handicapped in Head Start should be less complex than that in public schools.

Unclear definitions. A major problem in attempting any study of costs in developing policy or implementing programs of this type is the lack of clarity in defining certain terms and concepts. While ambiguity appears to be a problem in all settings concerning the handicapped, it is

likely that in defining program and associating costs within the public school arena, certain traditionally established meanings are consistently applied. In Head Start, however, neither the handicapped child nor the services which might be appropriate are as unequivocally defined or understood. The issue of defining "handicap" has been very evident since the Congressional mandate. It follows that the determination of what services, and therefore what costs are incurred, will also be subject to uncertain variation.

One particularly ambiguous situation lies in the issue of imputed costs. A major assumption in the financing of Head Start programs, quite aside from the matter of inclusion of the handicapped, is the documentation of a "local share" portion of the total budget. Unlike public school accounting procedures, the value of certain contributed services, materials, and personnel become an important part of the total financial picture. It is expected, therefore, that "in-kind" contributions are included in the computation of the total reported cost of providing Head Start services. Depending on the parameters of the definition, services obtained

for a child as a supplement to the Head Start program, such as physical examinations or medical/dental treatment, may or may not constitute a part of overall program cost. If a handicapped child receives medical treatment while enrolled in Head Start, and the receipt of the treatment is facilitated by the support staff of the agency, one might assume that the imputed value of such treatment should be considered a part of the total Head Start cost. But if the treatment probably would have occurred anyway, through the channels available in welfare or public health agencies, it becomes questionable whether it should be included as a part of the total. Given the existing guidelines to cost-accounting in Head Start, there may be many instances in which the decisions regarding the reporting of imputed costs are arbitrary.

In the absence of hard data, the observations which have been made regarding the relationship between Head Start and other (public school) agencies must be considered conjectural. This study was approached with the expectation that it would be possible to secure data which would illuminate the nature of the relationship and reduce the conjectural element. However, there was the additional expectation that

many constraints would be encountered that would limit the availability of maximally useful information. It was with these mixed expectations that the method for studying the problem was devised.

CHAPTER II

METHOD[2]

The collection of cost information for Task IV was carried out primarily in conjunction with on-site visits to regular Head Start programs, experimental programs, and 10 specially selected model preschool programs of Task III of this study. In addition, a portion of the data collected on the full-year survey of all Head Start programs in Task II was concerned with cost issues; these data also were used in the Task IV analysis.

In developing a method to assess the cost question, two separate but equally important factors were considered.

Experience

First, it was assumed that up to June, 1973, when this study began, Head Start agencies had accumulated some, however limited, experience with costs of serving the handicapped. Such experience may have been gained prior to the mandate, but it is reasonable to expect that more experience would be gained in months after the post-mandate budget year. It was also anticipated that existing accounting procedures might be very ill-suited to ready identification, calculation, and analysis

[2]Method and procedures described in this chapter refer specifically to the ways that cost data were collected for Task IV. Other methodological concerns, e.g., the selection of programs and the nature of the research approaches in the first and second rounds are described in Appendix A of this report.

of costs associated with the handicapped as a distinct group since, until the present time, there has been no administrative requirement or any other significant reason to keep books in that manner. Therefore, it was entirely possible that, however valid cost experience may have been, no means of "capturing" that experience had been available.

Projection

Second, it was assumed that irrespective of experience, Head Start personnel might be able to make fairly dependable estimates regarding what costs would or should be entailed, if and when full implementation of the intent of the mandate comes about. It was anticipated that such estimation might, in some cases, be entirely conjectural. However, it appeared reasonable to expect that projection from experiences in the experimental/demonstration projects, plus limited incidents in regular programs in which both the inclusion of handicapped and categorical accounting had taken place, would be possible.

In both approaches, the regular child unit cost would stand as the base-line against which costs of serving the handicapped would be measured. Such data probably can be handled more conveniently in terms of a differential index,

with the costs of serving the handicapped expressed as a ratio of the average regular unit costs. It must be recognized that the great variety of regular Head Start programs which are possible makes the determination of any single baseline cost very complex. The differences between full-day and part-day, summer and full-year, the number of weeks constituting a full year, all enter into accurate accounting of costs and necessitate conversion into costs per child-hour of attendance. However, it is also reasonable to expect that certain categories of costs, such as diagnostic and supportive services would be relatively fixed as a function of enrollment, regardless of total hours of attendance. Likewise, costs of providing staff training and consultation could be expected to be tied more closely to the number of settings than to either enrollment or quantity of staff, therefore causing unit costs to be greatly influenced by program size, where economies of scale would operate significantly.

It was also recognized that a complete cost analysis must include an accounting of both actual and imputed costs. In this respect, while it was known that existing accounting

guidelines call for identification of some imputed costs (e.g., in-kind vouchers, for purposes of establishing a minimum percentage of non-federal share in the form of contributed services and goods), it was anticipated that such accounting would not necessarily reflect all costs inherent to the program.

Initial Questions

With these assumptions and constraints in mind, the search for cost data began with an exploratory survey of 16 regular Head Start programs selected for the first round and 11 experimental programs. During that information-seeking phase, we sought to answer the following questions:

(a) At what point(s) within the organizational structure (grantee, delegate agency, center) are cost records generated, maintained, and accessible?

(b) What persons are responsible for and knowledgeable about maintenance of cost records?

(c) In what format (accounting system) are cost data maintained?

(d) Does the system currently allow for categorical distinction between regular and "excess" costs associated with serving the handicapped?

(e) Could the system be modified to facilitate categorical accounting of costs for the handicapped?

(f) To the extent that such categorical accounting has been operational, what experience regarding differential costs has been reported?

(g) What modifications would be necessary to insure accurate accounting of all imputed costs?

(h) What extrapolations can be made regarding costs of appropriate services for clients which would be present under full implementation?

(i) What obstacles would need to be overcome to permit accurate projection of costs associated with "ideal" service provisions?

(j) What differentiation in cost items or functions exist between regular and experimental Head Start programs?

It was anticipated that the exploration of these questions through the first round visits in the fall, and analysis of cost-related items in the Task II questionnaire would provide a basis for the formulation of a procedure to be used in the more extensive data collection of the second round site visits.

In visiting each site during the first round, documents (i.e., budgets and financial reports) were collected and interviews were held with all personnel, expected to have information or opinions regarding cost accounting procedures and cost experiences. The data gleaned from all sources, above all else, confirmed that hard facts upon which to draw conclusions would be sparse.

Findings from the first round visits will be presented in some detail in the next chapter. However, it was clear after the first round that there was an insufficient base of data on which to draw conclusions about the differential costs of serving the handicapped in Head Start. Further, this data insufficiency would not be resolved merely by visiting or corresponding with more agencies to collect more data, although that would be a necessary aspect of seeking better answers. Rather, a better solution called for the adoption, at least on a pilot or limited sample basis, of an accounting procedure which extended beyond most that were currently in use.

Such modifications in procedure had the major purpose of identifying expenditures (actual and imputed) which could be linked as necessary items in the service of the handicapped

and are distinct from services that are necessary and typical for all other children. Identification would, of course, be followed by analysis to permit classification into functional cost categories and determination of the marginal costs (probably expressed as a differential index) within such a functional breakdown.

This pilot procedure would mainly involve the handling of both actual and imputed costs, each having items which are directly and totally associated with the handicapped as well as other items which must be pro-rated between handicapped and typical children. These aspects might best be seen as a two-by-two matrix (Figure 1), in which only cell 1 can be easily identified, quantified, and allocated. Examples of items falling into that cell would be the cost of construction of a ramp for wheel chairs or purchased consultation relating to mobility instruction of a blind child.

Actual expenditures which must be pro-rated, as in cell 2, though easily identified and quantified, would be allocated by an arbitrary determination based on a "best estimate" of the degree to which the item of established cost is distributed between handicapped and typical children. An

	Direct Charges	Pro-rated Charges
Actual Expenditures	Easily identified Precisely quantified Unequivocally allocated — 1	Easily identified Precisely quantified Arbitrarily allocated — 2
Imputed Costs	Arbitrarily identified Arbitrarily quantified Unequivocally allocated — 3	Arbitrarily identified Arbitrarily quantified Arbitrarily allocated — 4

Fig. 1. Matrix of cost categories.

example would be the proportion of the salary of a teacher who has handicapped children as part of a regular group. In order to achieve some validity to this arbitrary allocation, guidelines would be necessary for estimating the degree to which children with special needs demand time from different classifications of personnel.

In the case of imputed costs of services directly concerned with the handicapped (cell 3), it is an arbitrary decision as to whether a certain contributed item should be considered a part of the Head Start program. If so, its value is also a matter of arbitrary decision, which hopefully can be somewhat standardized by establishing a rate schedule for commonly contributed services. An example would be an otologist's assessment and consultative aide contributed free

of charge by a medical school clinic, to the Head Start speech therapist on behalf of a deaf child. This clearly would be directly supportive and therefore allocated for the handicapped. But the question is this: Is it a Head Start cost, and what is its dollar value?

The accounting is all the more uncertain in the situation presented in cell 4, where all efforts to establish costs for the handicapped are based on arbitrary judgments. This would be exemplified by such items as time spent by a local public school psychologist in discussing with Head Start staff, all of the children (handicapped and non-handicapped) for whom optimal kindergarten placement is desired, or the well-child pediatric clinic services brought to the center by the health department for the convenience of the Head Start families.

The pilot application of an accounting procedure using such approaches, complete with guidelines to reduce variance in the arbitrary decisions, with an appropriate sample of Head Start agencies, was explored as a necessary step in taking the cost analysis beyond its present status to arrive at a firm basis for projecting funding.

Consideration was given to asking a number of programs, who enrolled significant numbers of handicapped, to "try out" such a modified accounting system during the final quarter of the 1973-1974 fiscal year. However, the proposal was discouraged by OCD advisors as infeasible due to probable adverse reaction from the field.

In view of data of the first round site visits and the Task II questionnaire, it was determined that procedures in the second round visits must be relatively unobtrusive and not too complex. Existing cost accounting practices in the field would not lend themselves to identification and documentation of most excess costs which would be expected to be involved in serving the handicapped. The information base upon which Head Start personnel might make estimates regarding the costs of services delivered, to say nothing of those services needed but not delivered, was likely to be extremely untrustworthy.

Given these constraints, two general means were employed for gathering potentially useful data. One involved the collection and analysis of existing budgets from each program selected for study in the second round sample. The second

involved inclusion of certain items related to costs in the interview schedule used by field observers in their discussions with staff on-site. The details of these two general approaches will be discussed separately.

Budget Data

In attempting to make analyses of budgets from each program, it was anticipated that certain problems of standardization would be found. The budget year varies somewhat among programs and in a number of instances additional grants were received, usually for special purposes, at times of the year not coinciding with the basic budget year. There is also variance in the degree to which separate budgets are maintained for the various types of programs (e.g., full-day, part-day, Home Start, Health Start), which any delegate agency might be operating. The practice of using certain agencies as the core grantee for training activities for a larger area also complicates the analysis of budgets. The varying practices regarding the allocation of supplemental funds for the handicapped from the federal and regional levels introduces an additional complication. Overshadowing all this was the probability of reluctance on the part of some

program directors to share such documents, in light of the defensive posture of programs regarding funding and mandates.

In spite of these constraints, an attempt was made to collect all relevant budget forms from each program in the sample. This included, where applicable, any special supplemental grants, such as those for the handicapped or training activities. Analysis of these documents included a separate study of regular and handicapped program budgets, where each existed, and a conversion of budget totals (including both federal and non-federal sources) into costs per child-hour in center-based programs. Such analysis required the separation of Health Start and Home Start programs, and the determination of actual weeks and hours of child attendance as the basic cost unit.

The variation in child/hour costs between regularly funded programs and those receiving grants for the operation of special programs for the handicapped was an initial item of analysis. Since it could be foreseen that the major factor in higher expenditures would be "having it to spend," this variation is probably of little import. A more germaine relationship was hypothesized, i.e., that which might exist between child/hour costs and intensity of inclusion of the

handicapped, particularly the severely handicapped, and certain types of handicapped, and measures of adjudged quality of programming.

Another aspect of budget analysis involved the determination of the percent of the budget total which was allocated for instructional salaries, support salaries, personnel salaries in general, and support consultants and service contracts. To accomplish this, a breakdown of the basic eight-line-item budget was performed, isolating those personnel (both salaried and contracted) which were concerned with classroom instruction, from those concerned with ancillary support. In view of previous observations, both in Head Start and in other studies of costs of educational services for the handicapped, it was anticipated that the needs of the handicapped might be reflected in heavier weighting of the total budget in line items concerned with either direct instructional personnel or contracted special ancillary support services. To search for such relationships, correlations were computed among three sets of variables as follows:

1. Cost Variables (as presented in budgets)

   (a) Child/hour costs in regular budget
   (b) Child/hour costs in special handicapped budget
   (c) Percent of budget allocated to salaries and wages
   (d) Percent of budget allocated to instructional salaries and wages
   (e) Percent of budget allocated to support salaries and wages
   (f) Percent of budget allocated to contracted and consultant services
   (g) Percent of budget allocated to support consultants
   (h) Percent of budget allocated to other contracted services
   (i) Percent of budget allocated to travel
   (j) Percent of budget allocated to space and facilities
   (k) Percent of budget allocated to supplies
   (l) Percent of budget allocated to equipment

2. Enrollment Characteristics (as presented in program reports and documented by site visit observations)

   (a) Percent enrollment of handicapped
   (b) Percent enrollment of severely handicapped
   (c) Percent enrollment of mildly handicapped
   (d) Percent enrollment of blind
   (e) Percent enrollment of visually impaired
   (f) Percent enrollment of deaf
   (g) Percent enrollment of hearing impaired
   (h) Percent enrollment of health and development impaired
   (i) Percent enrollment of physically impaired
   (j) Percent enrollment of speech and language impaired
   (k) Percent enrollment of emotionally disturbed
   (l) Percent enrollment of mentally retarded
   (m) Percent enrollment of undifferentiated diagnosis.
   (n) Severity of handicap in selected "case study" children

3. Programming Quality Measures (as documented by site visit observations)
   (a) Instructional materials available and adequate
   (b) Teacher preparation for class activities
   (c) Teacher presentation
   (d) Teacher emphasis on speech and language
   (e) Individualization of instruction
   (f) Physical and psychological environment
   (g) Integration of handicapped

Site Visit Data

Procedures for site visits in the second round called for the collection of three distinct types of information:

(a) Program-level data obtained in interviews with administrative staff,

(b) Child-specific data obtained through interviews, document analysis, and observation of selected handicapped children, and

(c) Classroom observation.

Selected items of cost information were included in the process of obtaining program-level and child-specific data. In general, these items covered the following nine broad categories:

1. Program data
   (a) Supplemental grants
   (b) Services from other community resources

(c) Modifications to facilities

(d) Training and technical assistance

2. Child-specific data

(a) Diagnostic services

(b) Classroom program

(c) Outside services (other than diagnostics)

(d) Transportation

(e) Parent involvement

Data relating with each of these categories were analyzed and summarized as a supplement, and in some cases, in contrast with budget data. The interview process permitted probing into particular details regarding expenditures, both those which had occurred and those which would have been desirable in order to serve handicapped children.

CHAPTER III

FINDINGS

The results obtained through the various approaches utilized in the Task IV effort will be presented under four general categories:

(a) Observations from first-round site visits,
(b) Information from the Task II questionnaire survey of full-year Head Start programs,
(c) Analysis of budgets in programs in the second-round sample, and
(d) Interviews and observations in second-round programs.

First-Round Observations

Observations made by site visit staff in 16 regular Head Start and 11 experimental programs in November and December, 1973,[3] demonstrated that current cost accounting procedures do not lend themselves to identification and documentation of most of the factors which might be expected to be crucial to establishing excess cost relationships between the handicapped and typical child. The major observations can be summarized as follows:

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[3]Budget information was not obtained on any of the three experimental programs visited in early spring, i.e., Anchorage, Alaska, Chapel Hill, North Carolina, and St. Paul, Minnesota.

1. Existing financial accounting procedures were straight-forward, apparently easily followed, and not very stringent. Requirements on financial reports from the federal level appeared to permit considerable latitude and did not call for any more detail than the eight general line items (plus sub-totals for personnel and non-personnel) which appeared on the budget (OS-189) cover page. While budget forms called for additional detail within each of the eight general lines, the line item format was maintained. The general lines for personnel were:

1.1 Salaries and Wages, which ranged from as few as three lines in most budgets (types of personnel) to as many as 12.

1.2 Fringe Benefits, which on the average required three or four lines, for example, for FICA, health insurance, unemployment insurance.

1.3 Consultants and Contract Services, which typically included two or three types of consultants: medical, dental and psychological services; pre-service and in-service training; and usually audit service. A total of six to eight line items was average.

The general lines for non-personnel were:

2.1 Travel, which included pupil transportation, staff transportation (local and out-of-area), parent transportation, and per diem expenses, usually entailed not more than six lines.

2.2 Space Costs and Rentals, which included classrooms and office space rentals and utilities, usually five or six lines.

2.3 Consumable Supplies, which included, for example, classroom and other teaching supplies, food, postage, medical supplies, about six lines.

2.4 Equipment Rental, Lease, or Purchase, which covered classrooms, offices, and vehicles, approximately four lines.

2.5 Other Costs, which included parent activities, field trip fares, various insurance and bonding costs, from five to ten lines.

There was no requirement or provision for converting this line item format into a functional category accounting system nor for obtaining a breakdown between categories of children such as "handicapped" versus "non-handicapped." While certain specific line items might be concerned solely with a service for the handicapped, no instance was noted in which a "sorting-out" of such items was being done.

It appeared that existing procedures were such that personnel with modest qualification in accounting

were handling the necessary tasks with relative ease. Accounting typically was handled at the delegate agency level (except where grantees operated centers directly). Records were generally in good order and accessible for scrutiny.

2. The accounting systems currently in use did not lend themselves readily to making categorical distinctions between regular costs and "excess" costs in serving the handicapped. It was generally felt by field staff conducting the field visits (and confirmed by personnel in the agencies) that modifications which would make such distinctions feasible could be made. No one welcomed the idea of complicating the existing simple system, but there was general recognition that the product of such accounting procedures could be important and that if clear instructions were developed, the additior burden would not be overwhelming. As one agency bookkeeper put it, "After eight years in this kind of thing, what's one more change in government procedure!"

3. Personnel have not been making an effort to keep track of costs associated with servicing the handicapped. There has been no requirement that they do so, and in view of the negligible available extra

resources for such service, there has been no incentive. Therefore, attempts to document cost experiences for the purpose of this study, or even to make rough estimates, were largely dependent on a review of current ledgers to ascertain any expenditures which could be clearly attributable to the handicapped effort. Another possibility was to determine whether personnel time had been added or altered due, solely or in part, to inclusion of children who required greater than proportionate staff attention, and if so, to make an estimation regarding the pro-rata share of staff cost which was involved. Attempts to establish data in either of these ways yielded very few instances of significant expenditures attributable to serving the handicapped.

4. Existing practices did not provide a complete, accurate accounting of imputed costs. Although procedures provided for recording of the financial value of contributed services, and this was usually done to the extent of establishing a 20 percent non-federal share in budgets and financial statements, it is likely that many more direct services to children, particularly to handicapped children, come about as a direct result of and extension to Head Start enrollment. The determination of whether such supportive

services should be construed as a part of the Head Start effort (an imputed cost) or merely an aspect of total societal investment in persons with special needs, is an uncertain matter. If Head Start is viewed as the central social service agency for that segment of society of a certain age and economic status, then it is likely that costs of many supportive services (medical, psychological, social work, and others) should be added to the Head Start total. There was considerable evidence that the handicapped effort has increased the incidence of contributed services of relatively high unit cost (e.g., psychological services, medical specialties) and that true imputed costs (the value of in-kind services) may be much greater than have been reported. Head Start personnel indicated that there has been no incentive for reporting all in-kind values, once the appropriate minimum local share has been accounted for. In fact, it is likely that non-reporting will continue because programs fear that federal input of funds will be reduced if contributed services are easily obtained.

5. Estimated projections focused on cost of staffing. Attempts to secure "educated guesses" from Head Start personnel regarding projected costs of

providing optimal services for all handicapped children otherwise eligible, led to speculation following a rather consistent thread. The staffs of most agencies saw the problem almost exclusively as one of staffing, with the greatest emphasis being on quantity of staffing. The handicapped child was, by internally applied definition, one who required extraordinary staff time. This was often expressed as "one to one" adult care for the child. Also a matter of staffing, but more qualitative, was the belief that considerable pre-service and/or in-service training of Head Start personnel would be required to fully implement the mandate. Instructional materials and equipment, facilities modification, and supportive services were not prominently mentioned as major costs concerns. While staffs viewed all these things as costly, they had little idea of "how costly" and seldom recognized that determination of such amounts would require a considerably more involved accounting procedure than is now used, with arbitrarily applied criteria for classification of expenditures. There were very few instances in which service for handicapped was perceived as requiring separate, special classes or facilities. Those who did express this view tended to be either the

very naive, holding very vague or distorted ideas about the nature of the handicapped population, or the very technically sophisticated who, being expert in care of the handicapped, thought that the competence of most Head Start personnel was not sufficient to permit integrated programming. Except for the minority of persons occupying either of those extremes, estimates of projected costs by most Head Start personnel did not involve the special class concept. In order to develop reliable estimates of costs of "ideal" service provision, it will be necessary to supply to agency personnel a much clearer definition of "handicap" and secure better understanding of the children and the service provisions which are, or could be, involved. At the present level of ambiguity on these matters, cost projection by personnel in the programs amounts to little more than guessing.

6. The comparison of the 11 experimental/demonstration projects to the 16 regular Head Start programs of the first round provided some valuable insights into what was involved in cost determination. Most of the experimental projects were constituted by an extra grant of from $30,000 to $50,000 to supplement an existing and continuing regular Head Start program. Although separate accounting by the

delegate agency or grantee for the experimental projects versus the regular Head Start programs was the rule, in most cases it was difficult and inappropriate to totally separate all operational aspects of each project from the other. Certain activities connected with the experimental project in a given agency would have carryover effect on non-handicapped children. Conversely, activity supported by the regular project grant might affect handicapped children as much non-handicapped. Therefore, it is problematic as to whether the most valid basis for fixing per-child costs in an experimental project is provided by using as a divisor the number of handicapped children enrolled, or the total children enrolled. To the extent that a particular experimental project was focused on direct service to children, it would be valid to arrive at a total cost per handicapped child by simply adding together the per-child cost from the regular program plus the special per-child cost derived by dividing the experimental budget total by the number of handicapped children served in that project. However, it was rare, if ever, that an experimental project could be said to be focused merely on direct child service. The very fact of being "experimental" introduced the necessity

that much of the activity (and therefore cost) was concerned with development and testing of models, dissemination, and training of personnel. The cost distribution between experimentation, development, and application phases of any endeavor is difficult to pin down with precision, but it is assumed that the cost of replication or continuation of an established model will be considerably less than that of initial development. At the time of our fall visits, the experimental projects were still very much in the development stage.

The experimental projects, as a whole, devoted more funds to the provision of staff training, than was the case with regular programs. One project was concerned exclusively with the development and testing of staff training models and had no direct operational function. Another devoted approximately 75 percent of its activity (and budget) to personnel training models while serving a small group of handicapped in a classroom within a University Affiliated Facility's Clinical Training Center. It might be expected that even in the long term, personnel training costs would be a continued extra cost directly attributable to enrollment of the handicapped. If so, a basis for determining how much training, by what delivery

system, to what size and constituency of groups, and therefore its cost, could be developed from examination of the current experimental projects.

In those projects where the experimental budget covered total operation of the program for a group of handicapped children, as contrasted with those only providing a supplement to children served by a regular Head Start budget, the reported costs per child/week in those programs studied in the first round, did not appear to be significantly greater than those found in many regular programs. A range of $35 to $55 per child/week was common in both types of programs. Although more study would be required to determine the reliability of the data and their interpretation, it would appear that those experimental programs which are designed to supplement regular program enrollment, constitute a more expensive model than those which are operationally and fiscally self-contained. This may be purely an artifact of bookkeeping, but it is reasonable to expect that such supplemental projects, concerned with development and personnel training activities, should actually be viewed as having their costs spread over a much wider population than just those children with whom the project

is directly related. The "spin-off" of these programs, through the multiplicative effect of teachers who learn and then pass on skills and knowledge to other teachers, must be considered when "costing out" any experimental project. In a somewhat analogous way, the "spin-off" of having handicapped children integrated in regular Head Start programs, where the human interactions in both social and cognitive developmental activities for all children are subtly influenced by the presence of the handicapped, must also be considered when "costing out" the enrollment of each handicapped child. In both cases, the ultimate effect can be shown to be a magnification of return for the dollar spent.

These observations from the first round visits played a significant part in determining the procedures deemed appropriate for securing additional data in the second round.

Findings from the Full-Year Survey of Regular Head Start Programs

The second source of preliminary data was secured from particular cost items included in the questionnaires returned by 1,353 grantees and delegate agencies in late fall, approximately 80 percent of the population of

full-year regular Head Start programs. As with any mailed questionnaire instrument, there is considerable opportunity for unintentional error due to misinterpretation, as well as conscious distortion in the absence of audit. The nature of some of the questions was such that they could only elicit estimates. While some of the data obtained from these questions could be calculated on a per pupil basis, other data could only be handled sensibly with the total program as the cost unit.

The cost items of the questionnaire focused mainly on expenditures beyond those incurred for regular instructional personnel. In most cases, these were services obtained through contracts (e.g., consultants, training) and therefore more directly identifiable and documentable costs, but ones which, if the assumptions discussed earlier are valid, would constitute a relatively small portion of the actual differential. To the extent that some of these services may have been performed by regularly employed supp personnel, the costs would be pro-rated, more difficult to document, but possibly constituting a greater proportion of the total.

Diagnostic services. One item dealt with reported costs of diagnostic services for the handicapped in Head

Start, whether such services were provided by the Head Start grant or were obtained from other sources. Pooling the data across all of the programs reporting a given classification of handicapped child, permitted the computation of an average expenditure, per program, for such services. This figure was then translated to a per-pupil unit by dividing the total expenditures by the reported number of children with that handicap enrolled within those particular programs. This method of computation did not allow for the children having the same handicapping condition but enrolled in programs (over half of the total) which did not report any costs for diagnostic services. Since we did not know whether costs were non-existent or merely non-reported in non-reporting programs, the only conclusion we can draw about the resulting data is that the figures are highly tenuous. With these limitations clearly in mind, some observations about the reported costs for diagnostic services may still be worthy of note.

The most frequently reported type of handicapping condition was speech impairment, with 955 (80.2 percent) of the programs reporting at least one such child. Of that total, 690 programs reported having costs (either

from their own grant or from other sources) for diagnostic services. The number of speech impaired children enrolled in those programs was 7,[illegible] by far the largest type) and the average per child cost (from all sources combined) for the diagnostic services was $[illegible]. This figure constitutes one of the smaller reported cost figures. Only the area of health or developmental impairment yield[illegible] smaller per-child figure ($[illegible]) and that type of child represents the second most frequently identified, both in terms of total children enrolled and total number of programs reporting the existence of such special costs.

At the other extreme, blindness, the category of handicap which was least frequently reported as enrolled, and also least frequently reported as being involved with extra costs for diagnostic services (only 37 programs) yielded the highest per-child diagnostic service cost ($581). The same pattern prevailed with deafness, which was the second least frequently reported condition, both in terms of numbers of programs and numbers of children, and which was the second highest ($[illegible]) in terms of per-child costs for diagnostic services.

This inverse correlation between incidence of a particular handicapping condition and the reported costs

for diagnostic services, while not perfect, did remain quite consistent. In order of magnitude, the reported per-child costs for diagnostic services from combined Head Start and other sources are presented in Table 2 (p. 67).

In every case, programs reported a larger cost attributed to "other funding sources" than to the Head Start grant, ranging from 37 percent more in the case of health or developmental impairment and speech impairment to 78 percent more in the case of deafness. This differentiation did not appear to be a matter of greater volume of funds available from other sources, but rather that fewer programs, and therefore fewer children, were reported as receiving help in diagnostic services from outside sources, and for those that do, the unit value was greater. It was also quite possible that the estimates of other sources imputed values were unrealistically high, that programs could establish a high level of "in-kind" local contribution, as required by provisions of the Head Start granting agency.

Summarizing, it appears that extra costs for diagnostic services, as reported here, may constitute a figure ranging from [illegible] that could be added to [illegible] Head Start cost of from $1,200

to $1,800 per year. It is very clear, however, that the large bulk of the enrolled handicapped would be the less expensive ones, with the high cost services being needed very infrequently.

Given the wide range in extra costs for diagnostic services, and the wide range in incidence of various handicapping conditions, it is almost meaningless to speak of "average' costs for these services. One way of approximating such a figure would be to multiply the reported costs for each handicapping condition times the reported incidence of that condition among the programs enrolling handicapped children. On the basis of approximately 10 percent of total Head Start enrollments in the survey being classified handicapped, a figure for diagnostic services might be projected.

While such figures might be useful for estimation of excess cost on a national or regional basis, and possibly for very large Head Start agencies, it is obvious that the wide variances which exist make the application of this "average" cost for diagnostic services to most program budgets an extremely uncertain procedure. The introduction of a few blind children into a program, for example, could be

TABLE 2

ESTIMATED COSTS FOR DIAGNOSTIC SERVICES FOR HANDICAPPED CHILDREN IN HEAD START

Handicapping Condition	Incidence in Head Start Programs	Costs for Diagnostic Services	Weighted Costs
Blindness	0.05%	$581	$ 29.1
Deafness	0.10%	267	26.7
Mental retardation	0.75%	249	186.8
Serious emotional Disturbance	1.23%	194	238.6
Physical handicap	0.95%	160	152.0
Visual impairment	0.66%	151	33.7
Hearing impairment	0.80%	136	108.8
Speech impairment	3.54%	106	375.2
Health, developmental impairment	2.02%	100	202.0
Total	10.10%		$1,418.9
Mean weighted costs/child		$140.5	

expected to significantly alter the cost picture for diagnostic services.

Special services. Another item of the full-year program questionnaire addressed the number of children receiving certain special services as a consequence of their handicapping condition, and the estimated costs of these services. The range of special services included individualized counseling for the child, counseling for parents, medication or drug therapy, prosthetic devices, physical therapy, "adjustment skills" experiences relating to physical handicaps, and "other" services.

Again, the numbers of children reported to have received such services varied as a function of incidence of enrollment, with the numbers receiving services constituting from 77 percent to 80 percent of those enrolled within each category of handicap. The costs per child for these special services, from Head Start grants and other sources combined, followed much the same order, with minor variation, as that reported for diagnostic services. In order of magnitude, the costs were reported, as indicated in Table 3. Again, an estimation of the additional costs for providing special services for handicapped children, on the average, might be determined by utilizing incidence figures and derived "weighted costs."

The differentiation between Head Start grants and other funding sources again followed the pattern of fewer children being involved in the receipt of services covered by outside funds and a much greater value imputed for those services coming from "other services." As in the case of diagnostic services, the utility of an "average" cost figure, on other than very large population units, is questionable. According to these data, the greatest costs for special services are associated with the deaf and with

TABLE 3

ESTIMATED COSTS FOR SPECIAL SERVICES FOR HANDICAPPED CHILDREN IN HEAD START

Handicapping Condition	Incidence in Head Start Programs	Costs for Special Services	Weighted Costs
Deafness	.10%	$1802	180.2
Blindness	.05%	1628	31.4
Serious Emotional Disturbance	1.23%	620	762.6
Hearing impairment	.80%	585	468.0
Mental retardation	.75%	457	342.8
Physical handicap	.95%	286	271.7
Visual impairment	.66%	248	163.7
Health, developmental impairment	2.02%	169	341.4
Speech impairment	3.54%	155	548.7
Total	10.10%		3160.5
Mean weighted costs/child		$312.9	

the blind. In an individual Head Start center, the inclusion of such children would be expected to alter the cost picture completely, since the anticipated costs of the special services alone, to say nothing of diagnostic costs and regular t[illegible]er costs, would add at least 150 percent to the average regular cost per child.

Physical facilities. The full-year program questionnaire also asked for a report on costs of modifications in physical facilities, required to better serve handicapped children, whether such modifications had been accomplished, were being planned to occur in the near future, or were recognized as needed but currently unscheduled. Such data

could only be reported on the basis of the total program, and made no allowance for indicating the number of children or the types of handicaps which were involved. Again, the sources of funding for such modifications included both Head Start grants and other sources. Since only 87, or 7.3 percent, of the 1,215 programs having handicapped children enrolled indicated a need for special or modified physical facilities, these data cannot be considered to have a very large impact on the total cost picture. Reported costs of modifications completed averaged $621 per program for those secured from Head Start funds and $3,667 for those paid from other sources. For those scheduled for completion in the near future, the average costs per program were more uniform, $1,115 and $1,460, from the two types of sources. Estimates on needed, but unscheduled, modifications were much higher, averaging $4,889 among the 13 programs so reporting. One could speculate that modifications in physical facilities would most frequently be perceived as necessary in the case of physically handicapped, blind, or deaf children, which, in terms of incidence, represent only a small proportion of total handicapped children who might be enrolled in Head Start. If this is the case, the number of children

involved wo ld be small and, therefore, tne costs per child would be great. However, in the absence of precise data regarding the number of children enrolled in those programs reporting on this matter, the meaning of the figures reported is unclear. Although a mean number of 17 handicapped children per program was reported among the 1,327 programs nationally, it is probable that those reporting on costs for physical facilities would have much more than the average number enrolled.

Special equipment and materials. A similar situation exists in the case of an item on the full-year program questionnaire dealing with purchased, planned, or needed special equipment and materials. A somewhat larger number of programs reported data on this subject, with the average costs of purchases from Head Start funds being $504 per program and from other sources being $589. Those materials for which the acquisition was scheduled in the near future were estimated somewhat higher, $965 and $631 respectively, and those which were reported as needed but not yet acquired or planned were priced at $1,848 per program. Again, the translation of these data into costs per handicapped child enrolled is extremely tenuous. The mean of approximately 17 handicapped children per program, reported by the 1,327

programs responding to the questionnaire, has doubtful relevance when applied to the 100-200 programs reporting in this category, but would average $64 per child. However, on the basis of what is known from other sources regarding costs for handicapped children in public schools, the costs of any non-personnel items in a total budget rarely exceed 20 percent. Accordingly, the costs associated with equipment and materials would, on the average, rarely exceed five percent, and would be limited to the few cases where special academic instructional materials are required, e.g. for the deaf, the blind, or the physically handicapped. The degree to which such needs would be relevant for pre-school will be discussed at a later point, but it should be clear that this aspect of the total extra costs of serving the handicapped will be rather insignificant.

Personnel training. In response to questions regarding pre-service and in-service training for staff in full-year Head Start programs, a somewhat larger proportion of the total number of programs responding indicated costs associated with such activities pertaining to the handicapped. An average cost of $520 per program was reported by the 443 programs which supported pre-service training by Head Start grants, and $383 per program

by those supported from other sources. An expression of need for more pre-service training was estimated at $1,585 per program. Translating these figures to costs per child is again tenuous, but since these data reflect reports from approximately half of the total programs claiming to be serving at least some handicapped children, it may be reasonable to apply the average figure of about 17 handicapped children per program, and combining the costs from both sources, compute an average expenditure in the neighborhood of $53 per handicapped child.

Similarly, in the area of in-service training, 408 programs reported that they were providing such activities from Head Start funds at an average cost of $481 per program, while 264 of these programs were conducting additional training with funds from other sources at an average cost of $579 per program. Somewhat larger cost estimates were given for training that was scheduled to be initiated in the near future, and a need was expressed for additional training beyond that which was occurring or was planned. Estimated costs of such needed training were $1,527 per program. Applying the average figure of 17 handicapped children per program would indicate that about $62 per child was being expended for in-service training.

While the estimated cost figures for additionally needed training activities probably should be considered in light of the tendency to be rather expansive when expressing "wishes," the figures of over $1,500 per program, for pre-service and in-service training each, would indicate an added expenditure of about $175 per handicapped child.

Summary of full-year survey data. The utility of the data from the full-year Head Start program survey for establishing the amount of extra costs experienced in serving the handicapped and for projecting what costs should be entailed if optimal programming were provided, is limited by the fact that these data deal only with diagnostic services, special services beyond that provided by the regular classroom teacher and aides, modifications in physical facilities, special equipment and materials, and personnel training. The extra costs associated with a more intensive ratio of regular staff (teacher and aides) and with any other costs which must be pro-rated, such as administration, are not addressed by these data.

A summation of the average costs per child for those items covered by the questionnaire (excluding those concerned with modification of physical facilities, where

the cases were too few to permit any valid computation) may be useful in providing a tentative indicator of average costs, if applied to a sufficiently wide population base. The amounts reported as cost history (as distinguished from cost projections) were:

Diagnostic services	$141.00
Special services	313.00
Special equipment & materials	64.00
Pre-service training	53.00
In-service training	62.00
Total	$633.00

To a major extent, these amounts can be assumed to be above and beyond the base costs for full-year Head Start programming for typical children, which average something over $1,600. Although the possibilities for distortion in these data were plentiful, and the variance among the several classifications of handicap was so wide as to make the application of any average figure inappropriate within a small population, the figures from these sources may contribute meaningfully to an estimation of the total differential costs in serving the handicapped.

Budget Analysis in Second Round Programs

In contrast to the information derived from questionnaires or interviews, where respondent interpretation

enters into the raw data, the analysis of budgets of the 36 regular Head Start programs visited in the second round provided a means of looking directly at financial variations which might exist as a function of "types" of children or service delivered, without the mediating influences of possibly biased persons. While the degree of congruence between budget documents and actual expenditures can always be questioned and the interpretation of the document by the data collector is subject to error, the type of error introduced by this approach is at least of a different nature from that anticipated in the other approaches.

The difficulty with securing copies of budgets was not serious, although in five cases it required repeated "pleading" by telephone after initial failure to obtain the documents while on the site visit. Fairly complete budget data were eventually secured from all programs.

Budget analysis revealed a wide range of factors entering into cost figures. The necessity of converting data into child/hour costs was made evident by the finding that the normal year for child attendance varied from 30 weeks to 52 weeks (mean = 36.9) and the number of hours in attendance per week ranged from 16 hours to 50 hours (mean = 26.7).

Since many costs continue regardless of actual child/hour attendance (i.e., 52-week administrators and 40-week teachers in 32-week programs), the relationship between annual budgets and child hours per year could be expected to be complex. Computation of correlations between child/hour costs and the number of weeks of operation per year yielded a zero order relationship. However, the relationship between cost per child/hour and hours per week showed a strong negative correlation (Pearson r = -.59, significant at .001). This suggests that the variance in child/hour costs would exceed the variance in child/year costs. The selection of the more valid unit would depend on whether one perceives the Head Start program as largely what happens when children are "in class" or rather the more broadly focused total community activity. This is a matter which will require more extensive discussion.

Total child hour costs (federal plus non-federal) on 36 regular budgets ranged from $1.96 to $3.45, with a mean of $1.74, S.D. $.70. While supplemental handicapped program grants existed in some of the 36 programs, budget data sufficient for analysis were obtained from only five programs. In those five programs, the addition of the supplemental budget brought the total child hour costs

for the [illegible] handicapped children [illegible] a mean of 33.[illegible] [illegible], 22.[illegible] [illegible].

The [illegible] of [illegible] various budget categories are displayed in Table 4.

TABLE [illegible]

PERCENTAGE DISTRIBUTION WITHIN BUDGET [illegible] [illegible] YEAR BUDGET

Budget Categories	Mean		Standard Deviation	
Salaries and Wages	[illegible]		[illegible]	
Instructional personnel		33.[illegible]		[illegible]
Support personnel		2[illegible]		[illegible]
Fringe benefits	[illegible]		2.[illegible]	
Consultants and Contracts	4.4		2.[illegible]	
Support consultants		3.1		2.[illegible]
Other contracts		1.[illegible]		1.2
Travel	[illegible]		[illegible]	
Space	1[illegible].1		5.[illegible]	
Supplies	[illegible]		[illegible].4	
Equipment	1.[illegible]		[illegible]	
Other	1.4		.[illegible]	

A [illegible]

[illegible]

[illegible]

[illegible]

The [illegible]

[illegible]

[illegible]

[illegible]

TABLE

[illegible]	Mean	Standard Deviation		
[illegible]	2[illegible].[illegible]		2[illegible].[illegible]	
[illegible]		[illegible].4		18.[illegible]
[illegible]		[illegible]		12.[illegible]
[illegible] Contracts	[illegible].2		32.9	
[illegible]		21.[illegible]		2[illegible]
[illegible]		16.2		2[illegible]
[illegible]	[illegible]		[illegible]	
[illegible]	[illegible].4		[illegible].3	
Supplies	[illegible].1		[illegible]	
Equipment	[illegible]		[illegible].1	
Other	[illegible]		1.[illegible]	

[illegible] The supplemental budgets [illegible] [illegible] allocation to equipment, and somewhat [illegible], the variance in the supplemental [illegible] interpretation [illegible], hazardous, [illegible] salary and wage category [illegible] would have a [illegible] demonstrates the typical [illegible] of a special purpose, supplemental [illegible].

Correlation [illegible]
Enrollment [illegible] Round

The relationship between child-hour costs and [illegible] of enrollment of the handicapped was

of key interest. However, analysis (Pearson correlation coefficient) revealed no significant relationship between cost per child hour and percentage of total handicapped enrollment, severely handicapped enrollment, or mildly handicapped enrollment.

Although the number of cases is probably too small to be dependably generalized, those programs enrolling severely blind children appeared to have cost per child hour characteristics such that a negative relationship with cost was found. That is, the program with higher percentage enrollment of severely blind tended to have lower child hour cost. It should be understood that the mean enrollment of severely blind children per program was .09 percent (that is, 5 children in 10,000) and that 32 of the 36 programs reported enrolling no blind children.

In a similar manner, the correlation between enrollment of the severely deaf and child/hour costs yielded a positive relationship (significant at .03 level). Again, the number of cases is small, with a mean enrollment of .17 percent and only 3 of the 36 programs reporting any severely deaf children.

Correlations between enrollment and other aspects of costs, such as the percentage distribution among

budget categories, revealed scattered instances of significant relationships, no more than would be expected purely by chance. One observation which may be of some interest was the finding, in the case of enrollment of the severely mentally retarded, of a negative relationship with percentage of budget in instructional personnel and a positive relationship with percentage of budget in support personnel. To the extent that this may be more than a chance variation, it would suggest that programs enrolling more severely mentally retarded may tend to see their need for resources more in the kinds of personnel who support rather than instruct. Again, the mean enrollment of severely mentally retarded was only one-half of one percent, and only 13 of the 36 programs reported any such enrollment.

In addition to percentage of enrollment, as an indicator of degree or magnitude of the problem facing Head Start programs in attempting to serve the handicapped, another measure was generated by the perceived degree of severity of handicap of the selected case study children. Since the number of children studied in each program varied, it was necessary to compute an "average" or composite score for each program which would represent the severity of handicap, as judged by site visitors,

with which program personnel had to cope. Correlations between this "composite severity index" and the several cost variables yielded only one significant relationship out of twelve possible computed on regular budgets. However, that one was a strong positive relationship between severity of handicap and percent of budget used for equipment.

Correlations between Cost and Quality of the Second Round

Correlations computed between the cost variables and the derived measures of program quality, i.e., instructional materials, teacher's preparation, teacher's presentation, teacher's emphasis on speech and language, individualization of instruction, physical and psychological environment, and integration of the handicapped yielded virtually no significant relationship. Only one, the Pearson "r" of -.58 between child/hour cost and integration score approached significance (.06 level). If this were interpreted as a valid relationship, it would suggest that lower child/hour expenditures were associated with higher integration. However, it would be extremely risky to draw conclusions on the basis of these data.

Site Visit Data of Second Round Programs

The observations made in second round visits consisted of two general categories, program-level information and child-specific data. Within each of those categories, the experience and opinion of program personnel were probed to elicit data on a number of topics.

Supplemental grants. The receipt and use of special supplemental funds, earmarked for better serving the handicapped, were acknowledged by 13 of the 36 programs. In only six cases were there actual budgets for supplemental grants. In the remaining programs, it was merely an allocation, e.g., $180 per handicapped enrolled or $12 per total enrollment. In two cases, this type of allocation was not even acknowledged as an earmarked amount requiring accounting of particular usage.

The use of supplemental funds, where a specific budget existed, revealed an approximately similar distribution of funds among categories, with the apparent exception of greater allocations for contract / consultant services.

Respondents to questions regarding the use of special funds received made mention of training for

incumbent personnel (four times), purchase of diagnostic and therapeutic services (four times), supplies and equipment (three times), and hiring of new personnel (two times).

The attempt to assign firm dollar figures to these items was largely unsuccessful. Personnel in the programs tended to have little time or interest in the details of finance of services, and were understandably vague about sources and uses of various accounts. This was especially true in programs where funds came from a variety of federal, state, local and non-governmental agencies.

Personnel were also asked to indicate the purposes for which additional funds would be used if they were available. In 8 of the 36 programs, persons interviewed saw no need for additional funds for serving of the handicapped. Among the 28 programs, where opinions were expressed regarding the need for more funds, additional specialized personnel were a priority item (mentioned in 23 instances), and in-service training of existing staff was indicated in 13 instances. The purchase of consultants and other contracted services was seen as the more feasible approach in six programs. Equipment, instructional materials, and facilities modification were mentioned in 15 instances.

Estimates of the financial resources needed to accomplish adequate programming for the handicapped were wildly variant. A modest-sized program enrolling only 14 handicapped, out of 128 total, estimated a need for $150,000. A smaller program enrolling 3 handicapped out of 76 estimated a need for $100,000 to tool-up for such service, while only $65,000 was indicated by a much larger program which had identified 233 handicapped children in a total enrollment of 1,900. These figures are presented merely to illustrate the difficulty, among most Head Start directors of programs we visited, to conceptualize the nature and magnitude of needed resources. Some saw their needs in rather concise terms, e.g., $600 for a particular in-service training package, or $3,000 for some speech and hearing equipment. Others proposed an approximate doubling of existing staff, facilities, and contracted services.

Community services. The 36 programs, enrolling 1,346 handicapped (226 severely disabled and 1,120 mildly impaired), reported community resources serving 875 handicapped. (Some children received more than one such service and were, therefore, counted twice.) Numbers in

each program receiving such service ranged from 0 to 233, with a mean per program of 23.8 (S.D. 43.9).

Value of services (per child) was unknown (i.e., impossible to estimate) in 44 out of 58 cases. Those cases where a value could be established ranged from $12 per child for speech evaluations to $900 for complete diagnostic, counseling, and follow-up for mentally retarded, $500 for corrective surgery, and $400 for hearing aids. Median per-child value for services to which values were ascribed was $130 (mean = $221).

In 11 out of the 58 cases, the service was paid by Head Start funds. Medicaid paid for services in three instances, college or university clinics in nine cases, Crippled Children's Services in eight cases, and public school districts in five cases. A large variety of other agencies, private and public, contributed the service directly or bore the cost of the service delivered by the provider-agency.

In 14 instances, services associated with speech handicapped were mentioned. Psychological services (diagnostic and/or therapeutic) were mentioned 19 times. Medical services associated with physical health problems were mentioned 26 times. Diagnostic services appeared to

be more frequently indicated than therapeutic services (38 instances to 32), but in many cases the description was unclear as to the exact nature of the service provided.

Services, not received but needed and reasonably available from community resources, were mentioned in 11 of the 36 programs, including 265 handicapped children. Therapeutic services were mentioned most frequently, and focused on medical and related needs for physical handicaps (four instances) and mental health services (four instances). Costs for such services were estimated in only four of the programs, and included such diverse items as $78 as an initial outlay for orthopedic braces and $120 for year-long speech therapy services.

Physical facilities. Modifications in facilities were reported in only 5 of the 36 programs. Funds invested ranged from $75 to $1,200 and were largely in response to needs of the physically involved child. Per-child (handicapped children) costs for modifications ranged from $6.88 to $141, but the small numbers involved leave the interpretation of the data highly speculative. In four of the five instances, regular Head Start funds bore

the cost of modifications, while in the remaining instances all costs were contributed.

Training and technical assistance. The cost of training and technical assistance was very difficult to establish since, in many cases, the service was either provided through a State Training Office, with no information as to cost (or value) available to the recipient program, or as a contribution of a local school system, college or university, state department of education or mental health, and other institutions or agencies.

Thirty-three of the 36 programs reported participation in at least one training and technical assistance activity, with eight programs reporting three or more separate activities. Definite dollar values were indicated for 26 of the 55 reported activities, with the values per activity ranging from $80 to $20,000. The median value on activities for which an amount was established was $467 (Mean = $1,847).

Local Head Start funds were the primary source of support for activities in 21 of the 55 instances. State, regional, or other (i.e., Cluster Grant) OCD training offices were indicated as providing the assistance in 14 instances.

The most common model appeared to be the one- to three-day workshop (28 instances), although longer workshops were described in six instances and college level, credit bearing courses were also mentioned six times. The content of training activity dealt primarily with an orientation to handicapping conditions and an introduction to diagnostic and therapeutic techniques.

In responding to a question regarding projected needs for training and technical assistance there was a frequent expression of need for more intensive, specific skill development. Eight of the 18 programs indicating a need for more training and technical assistance focused on such specific skills. Estimates of the costs for such additional services were extremely random, with most respondents "shooting from the hip" with estimates of $1,000 tc $3,000. One large program proposed a $50,000 technical assistance team for pre-service training of new staff.

Child-specific data. Costs associated with serving 74 selected case study children were collected in 26 programs. Since these cases included both severely and mildly handicapped, there were many instances in which no extra costs were identified.

In the area of diagnostic services secured, 37 of the 74 children were listed as having received extra services. In 19 cases, still more service was needed. In 17 of the 37 cases, the dollar value of services received was unknown. Among the 20 cases where a cost was determined, the range was from $15 (e.g., for speech assessment) to $553 for a complete medical study, with a median cost of $27.50 (mean = $86). Fourteen of the 20 cases involved speech and/or hearing evaluations, seven included psychologicals, and six involved visual evaluations. Complete medical studies were described in 10 cases.

Extra costs associated with the classroom program were described in only six locations. In two locations (two children), minor facility modifications were described, with contributed services. In five locations (nine children), some extra materials and/or equipment had been provided, ranging in cost from $10 to $100 per child.

Outside services (beyond diagnosis) were indicated for 42 of the 74 children. Long-term speech therapy was mentioned most frequently (12 cases), with psychological services being purchased for seven cases, and a variety of medical services for other cases. In many instances, it

CHAPTER IV

DISCUSSION

The method of drawing data from a variety of sources, with a variety of procedures, could be expected to produce results which would not always be consistent. It is therefore necessary to examine the instances in which findings appeared to be inconsistent and to reconcile existing differences. In many instances, apparent discrepancies may be readily explained by the nature of the data source or collection procedure. In other instances, differences may remain a function of limited sampling.

In general, cost information generating from the full-year survey tended to present a stronger case for a large differential between costs of services for regular children versus that for the handicapped than appeared from other sources. It might be that estimates made in the absence of an interviewer who could ask for documentation would tend to be less conservative. On the other hand, the number of cases represented by the questionnaire

data is vastly greater than the small sampling with which direct personal contact was made, and therefore those data cannot be totally discounted.

In another respect, analysis of regular budgets largely failed to show any differences in cost characteristics as a function of enrollment of the handicapped, unless a special supplemental grant was received, whereupon the per-child costs accelerated dramatically. However, even in the cases of the few programs receiving supplemental funds, variation in costs among those few did not appear to be a function of magnitude of enrollment, severity of handicap among those enrolled, or program quality indicators.

These findings may be readily understood when one considers that budgets were probably largely set forth on the basis of expectations regarding the bulk of the program enrollment, with little consideration that a significant enrollment of significantly handicapped children might be encountered. The enrollment of mildly handicapped, which has constituted the situation in most programs, could be accommodated within existing budgets since the relatively modest variation in costs would be largely assumable by contributed resources. The very few cases

of severely handicapped children which have been in attendance, except in those programs receiving special supplemental grants, could also be absorbed without a great strain on regular budgets, where little significant additional programming was offered.

On the other hand, in those agencies receiving supplemental funds, program enrichment can easily and appropriately utilize whatever funds are available, making possible the accommodation of greater numbers of handicapped and/or more severely handicapped children.

The most reasonable explanation for the situation on current and recent cost experience involves, therefore, two factors.

First, there has been no significant funding behind the mandate. Except for special grants for experimental programs, the only provision of extra funds to assist in the enrollment and service for handicapped has been a small extra allowance, distributed by whatever formula was deemed best by each Regional Office. This nearly negligible "bonus" was reportedly used in some agencies to purchase consultant services and training, or materials and small equipment designed to be of special value for certain handicapped children. In no

case did this constitute more than one percent of a budget. It was apparent that Head Start decision-makers have not been prone to divert major amounts of funds from a customary budget item to meet a new or special need associated with the handicapped. The shape and balance of regular Head Start budgets appeared to have become established without inclusion of extraordinary services for the handicapped, creating the strong likelihood of earmarked "add-ons" being the only way that the shape would be readily changed.

Although it was not readily reflected in budgets, there was indication from discussion with personnel in the centers that some realignment of personnel assignments had taken place in a direct response to the need to serve the handicapped. An additional amount of volunteer time, for example, might be focused on the individual care needs of a moderately to severely handicapped child. Or, in hiring new staff to replace loss (normal turnover), a more highly trained (and therefore more expensive) person might be selected, in anticipation of the technical skills needed to deal with the handicapped. In selecting the content of in-service training activities, special attention was sometimes given to issues regarding the

handicapped. Therefore, while the budget itself showed little if any evidence of special costs for the handicapped, such costs did, in fact, exist. From examination of budgets it would appear that there has been little extra money available; therefore, little expenditure to identify and report.

Second, the number of children for whom significantly "extra" services are warranted is not great, nor has it changed appreciably during the past year. As reported elsewhere, the large majority of identifiable handicapped now being enrolled in Head Start are mildly involved. Furthermore, this enrollment status has not changed greatly as a function of the mandate. There has been little press for new, costly services; therefore, little expenditure to identify and report.

These two factors together have negated the probability of significant "handicapped cost history" upon which to establish a solid base for real cost differential. If one had to report on the basis of these limited data, the conclusion as to "extra" costs for servicing the handicapped would have to be that they have been minimal. However, this in no way constitutes an answer to the question of what costs would be if

appropriate services were made available to significantly handicapped children--that is, if the intent of the mandate were fully implemented. Study of the experimental programs provided a somewhat better basis than the regular programs, but even those data are limited.

In the absence of cost history, projections regarding what realistic costs might be in the future required the collection of hopefully informed guesses, rather than documented accounts. These estimates, in both first and second round site visits, were based on extremely scant data. Those costs which were direct and could be traced by specific line-item expenditures appeared to constitute only a small portion of the total, as compared to that concerned with personnel time, which in every instance would require pro-ration at an unknown or arbitrarily established rate, based on the estimated sharing of an individual teacher's efforts among the regular and handicapped children in his/her group.

In making this judgment, it was assumed that Head Start programs, like most other systems for delivery of educational services, would expend from 75 to 85 percent of the total budget on personnel. It has been expected that, as in the case of public school finance, most of

those personnel costs would be attributable to the teacher role, rather than to other administrative or support personnel. However, an examination of the budgets of a number of regular Head Start programs including both large and small organizations, in both first and second round programs revealed that total personnel salaries comprised only about 67 percent of the total budget, including fringe benefits. Support personnel salaries (including administration) comprised 30 percent of the total, with the teacher line item alone accounting for another 31 percent of the total.

These percentage distributions of personnel items are strikingly different from public school budgets, in general, as reported by the National Educational Finance Project, and the data reported by Rossmiller, dealing specifically with the handicapped in public schools. In most public school budgets the teacher item alone constitutes from 50 to 60 percent of budget totals.

It would seem to follow that if the major portion of the total educational costs were to be found in the teacher salary item of the budget, then the major source of differentiation in costs, between the handicapped and the regular child would also be found in that item.

Since the teacher role is reasonably well specified, identification of the sources of extra costs, primarily as a function of a more intensive teacher-pupil ratio, is feasible. However, where a greater proportion of the personnel costs are in supportive roles (e.g., nurses, social workers, bus drivers, nutritionists) as appears to be the case in Head Start, the variety of roles involved and the relative lack of specification as to each one's interaction with certain numbers of children, whether handicapped or not, makes the estimation or documentation of differential costs much more difficult.

In order to make an estimation of the differences in costs which may be expected between the regular Head Start child and the handicapped, it is necessary to speculate regarding the degree to which differences would be distributed, proportionately or otherwise, among the several items which together comprise the total budget. Studies of public school special education program costs, such as Rossmiller's, have shown that in most instances the cost differential bears a direct relationship to the teacher-pupil ratio utilized for the particular handicapping condition in question. It is logical that if 60 percent of a school budget is allocated for teacher's salaries,

then whatever difference exists between the regular teacher-pupil ratio and the teacher-pupil ratio found for the handicapped, would account for 60 percent of the resulting costs for educating the handicapped. As an illustration, if a school system has a regular teacher-pupil ratio of 1:28 and a regular per pupil cost of $1,000, a program for the deaf maintaining a teacher-pupil ratio of 1:7 (four times the regular ratio) would be expected to have a per pupil cost of $2,400 (60 percent of $4,000), even if all other costs of education were assumed to be exactly the same as for the regular pupil.

In fact, many other costs are assumed to be tied to the classroom teacher unit, so that a pro-ration of administrative costs, maintenance costs, instructional support personnel, and indirect costs such as fringe benefits, is applied on the same basis, established by the teacher-pupil ratio. By such procedures, the only aspects of the total costs which are likely to vary from the ratio index are those which are attached to the individual pupil, rather than to the teacher unit, such as instructional materials and equipment, health and food services, transportation, and perhaps certain direct-service support personnel such as therapists.

Following a similar logic in attempting to estimate differential costs in Head Start, it might be assumed that the costs which were calculated from the questionnaire data, and which were estimated at an average of $633 per handicapped child, represent extra costs above and beyond the regular Head Start costs, and associated with those aspects of the total budget other than teachers and teacher aides. Since Head Start budgets, in general, appear to allocate an average of only about 30 percent of their total to instructional personnel, plus another three to four percent in fringe benefits, it would follow that the $633 average extra costs should be associated with the 67 percent which remains. If the extra costs of serving the handicapped can be expected to be distributed proportionately across all budget categories, and $633 represents 67 percent of the extra costs, then the total extra costs would be computed at $945. Comparing this figure to an average annual Head Start cost of approximately $1,600, yields a differential cost index of approximately 1.69. That is, the anticipated costs of serving the average handicapped child in Head Start would be approximately 1.69 times the cost of serving regular children.

This figure, though somewhat smaller, compares favorably with that developed from Rossmiller, in which the average handicapped child costs have been computed at an index of approximately 2.1. It is important to remember that this average index reflects a range in indices from 1.18 in the case of the speech handicapped to 3.64 in the case of the physically handicapped, with tremendously wide variances among reporting systems, within each of the handicapped classifications. It would follow that similarly wide variances could exist quite normally within the Head Start population.

It is also important to note that there may be factors which would render invalid, some of the assumptions upon which these computations were based. A number of these possibly distorting elements will be discussed.

We have seen that, in comparing Head Start budgets to public school budgets, a smaller proportion of the Head Start total is allocated for teacher salaries and a larger proportion for other support personnel. This finding indicates that in Head Start the programmatic emphasis is focused less on instruction and more on other social, health, and welfare related services. It is quite possible, therefore, that a comparison with public school

special education services [illegible] to which teacher-pupil ratio [illegible] differential costs for the handicapped [illegible] different in Head Start. One possible source of difference would be the degree to which credentialed teachers [illegible] paraprofessional staff figure in the total personnel budget. In the public school setting, where handicapped children create a need for a more intensive teacher-pupil ratio, it is usually responded to by adding credentialed teachers. It is quite possible that in Head Start, where credentialism does not have the same force, the adjustment to a more intensive teacher-pupil ratio may be accomplished by merely adding teacher aides at a considerably lower unit cost, once the first teacher unit is onboard.

Another possible effect of the lower emphasis on instruction may be found in the area of instructional materials and equipment. In the public school setting, with the emphasis on academic learning, the differences in instructional materials between the handicapped and the regular student, particularly with the deaf, the blind, and the cerebral palsied will be striking. By comparison in the Head Start setting, with an emphasis on social, affective, psychomotor development, the

activities which constitute an optimal program for the handicapped may not require very much different materials from those required for the regular child.

In a similar manner, given the currently observed practices and the philosophical thrust which promotes integration of the handicapped in Head Start, rather than the self-contained special class model which has characterized [illegible] special education programs, the concept of [illegible] units of handicapped children, and the practice of [illegible] on a classroom unit basis would not apply in the same manner as in the public schools. The first two to three handicapped children in Head Start will be [illegible] one or two children in a group of 15 to 20 regular children, with a teacher and a varying number of aides, depending on the severity of the handicaps of the children, may create a quite different basis for [illegible] administrative and other pro-rated costs, [illegible] and in-service training.

All of these factors would suggest that a greater portion of the differential between the handicapped and the regular child would be found in the services which are individually and directly delivered to the child, such as health and social services. The method for

accounting for any differential in the a ount of these services for the handicapped, as compared to the regular child, would necessarily take a form different from that of instructional services, which are ordinarily delivered in a group mode.

omparing the data from the site visits, especially the second round sample, with those from the full-year survey, suggests somewhat more conservative cost differentials. Budget data, in fact, totally fail to demonstrate any differences in planned expenditures, except where special supplemental allotments were provided. Actual expenditure differences were claimed, though in modest amounts, leaving any significant cost differences to be found via contributed services (imputed costs). Even within the area of imputed costs, estimates were somewhat more modest among the programs we visited.

Projections generating from the programs reporting on the survey suggest a differential index between typical and handicapped Head Start children in the order of 1.7, or an extra $900 to $1,000 cost on top of an average regular cost of $1,600 per child/year. However, these projections appear to be based on a hypothetically handicapped child, without clear distinction regarding

the severity of handicap. With such hypothesizing, it is easy to attribute needs to an entire group of children, nominally identified as handicapped, which apply only to a few of the more severe cases within the group.

Projections generating from site visit interviews, on the other hand, tended to be based less on hypothetical children and, more directly, on real experiences of personnel with children in their programs. In such instances, since most of the "handicapped," within the experience of Head Start personnel, had only moderately specialized needs, instances of major cost differentials were fairly infrequent. Thus, projections from this source, based on experiences with diagnostic services, other outside services, classroom program modification, facilities modification, for example, were subject to the influence of a wide variance in cost history, with the median figure always much lower than the mean, making the concept of an "average" cost virtually meaningless. The combined effect of these factors would tend to make projections regarding costs more directly a function of one's awareness of the degree of handicap involved. In a few cases, a cost expectation double or triple that for regular children would not be unreasonable. For the

vast majority of children currently being identified as handicapped in Head Start, a differential of 10 to 20 percent above the regular costs is all that would appear to be justified.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Major Conclusions

The major conclusions which can be drawn from the Task IV effort, though few, can be stated quite simply. They are the following:

1. Existing accounting practices in Head Start agencies fall far short of permitting complete and accurate documentation of the true costs of serving handicapped children as a part of the overall Head Start program.

2. Estimates, based on such meager data as do exist, suggest that the cost of serving those handicapped children who are now enrolled (primarily the mildly handicapped) is only slightly more than that for serving any other typical Head Start child. Expressed as a differential index, this would probably fall in the range of 1.1 to 1.3.

3. Additional estimates based on even less firm data suggest that the cost of serving those more severely handicapped, who are, we believe, the intended target population of the mandate and who are currently only rarely found

within Head Start enrollments, is significantly greater than that for the typical child. Expressed as a differential index, this would probably fall in the range of 2.0 to 3.0.

4. Projections as to what costs ideally should be, in order to deliver services appropriate to the needs of handicapped Head Start children, as opposed to what is currently being found, suggest that the indices expressed above are reasonable for the particular populations being considered.

5. The determination of an overall "average" cost of serving the handicapped in Head Start is virtually impossible since the magnitude of the differential is dependent upon the degree of severity of handicap and the definition of appropriate service, both of which can be highly variable. Projections of the costs for optimal programming for the handicapped children who, we believe, should be served under the mandate must always be stated as a function of the nature of the handicap and the service to be provided.

The observations leading to these conclusions have been discussed in earlier chapters of this report. It is clear that in the few instances where programs were serving severely handicapped children, both the cost history and the cost

projection, based on however soft data, point-up an entirely different cost picture than that for the majority of the children enrolled, including those who, for the purpose of meeting mandate quotas, may have been identified as (mildly) handicapped. Therefore, in terms of costs, we have more variance within the group defined as handicapped than between that group and the "typical" children.

This being the best presently available description and explanation of the state of affairs in Head Start regarding costs, a number of recommendations become appropriate and are directed toward short-term management as well as longer-range policy considerations. These recommendations are posed as providing some help in dealing with the issue of costs in all Head Start programming, with particular attention to meeting the needs of all the handicapped.

Final Recommendations

1. A cost accounting procedure should be developed and implemented in at least a representative pilot sample of Head Start agencies, which provides for the recording of documented direct costs and an established pro-ration of indirect costs, utilizing programmatic budget procedures.

A procedure adequate for the purposes required here would have the characteristics of not only "earmarking" each direct expenditure attributable solely to service for a handicapped child, but also establishing a standard rate at which shared services are proportionately distributed among the regular and handicapped children receiving them, and recording the costs accordingly. Such a system would also need to set forth guidelines for the accounting of all imputed costs. This would require decisions and rules for the inclusion and exclusion of indirectly procurred services, a basis for documenting the value of contributed resources, and sufficiently stringent controls so that accountants in local agencies would be unlikely either to overlook or "pad" costs correctly attributable to the handicapped.

2. Agencies selected to pilot the new accounting procedure must be allocated additional funds with which to provide the "extra" resources required for optimal programming for the handicapped. The supplemental allocation of funds need not, and should not, be "unlimited" but should provide a reserve from which sufficient funds for each appropriate service can be drawn on the basis of demonstrated need. The

additional expenditures must be made subject to audit, both on financial and programmatic grounds.

3. Data generating from such a pilot implementation should be used to refine a schedule for the provision of extra funding to any Head Start agency which proposes, and later documents, the delivery of special services for the handicapped. Such a schedule would permit an agency to know, in advance, approximately what additional funds they could receive by electing to take on the responsibility of serving more severely handicapped children. In some cases, this might serve as an incentive for consciously changing and expanding the program within an agency; in others, it would only provide a "safety margin" to the agency suddenly confronted with a more severely handicapped child than they had anticipated. In either case, it would provide a large measure of assurance that handicapped children would not be denied service in Head Start for reasons of financial limitations.

4. In the distribution of funds for Head Start services, the allocation of extra funds for the handicapped should be based on services rendered rather than on numbers of identified children enrolled. The requirement of certain

"quotas" for enrollment tends to lead more to the identification process than to guarantees of appropriate services. The attachment of extra funds (a bounty) on each handicapped child further accentuates the tendency to "label." On the other hand, the attachment of funds to services delivered has a greater probability of focusing emphasis on the special needs of the child. A mechanism would be required whereby the agency could draw upon an account, up to a certain established maximum, to provide services in accordance with determined need. General guidelines regarding permissible services and range of expected costs would enable the agency to draw the funds, deliver the service, and document the expenditure with assurance that an audit would confirm the propriety of the expenditure. Established maximums for special expenditures would be applied to the agency as a whole rather than to the individual child, and would be based on total enrollment, using the percentage of the total enrollment which could be anticipated as needing services, and the maximum anticipated value of such services. Thus, while a generous ceiling on services for any one child would be operative, these would be subject to audit and, moreover, control over imprudent

expenditures on a agency-wide basis would be exercised by the formula-based maximum allowance.

5. In the appropriation of funds for Head Start, the extra costs of providing for the handicapped should be acknowledged by setting aside additional funds, earmarked for such exclusive use. The amount of such supplemental appropriations should be determined by the reasonable expectation that approximately three percent of otherwise eligible children can be considered sufficiently handicapped to require special services, and such services cause the total cost for these children to range from two to three times the costs for other, non-handicapped children. While it would not be expected that every agency would fully utilize the funds potentially available through the supplemental appropriation, it would provide the "bank" from which agencies could draw to deliver the services when and wherever the need is demonstrated.

These recommendations are intended to reflect the summary conclusion drawn from the Task IV findings. While circumstances, at present, do not permit a precise statement regarding costs and the handicapped in Head Start, evidence is sufficient to demonstrate the need for additional funds,

and to demonstrate that greater precision will not be forthcoming until additional procedures, bolstered by additional appropriations, are authorized and implemented. The present lack of precise information should not deter positive action which would improve both the status of handicapped children and the status of our knowledge about how best to serve them.

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APPENDIX A

METHODOLOGY, PROCEDURES, AND PROBLEMS

OF GENERALIZABILITY

METHODOLOGY, PROCEDURES, AND PROBLEMS OF GENERALIZABILITY

This chapter discusses methodology, procedures, and problems of generalizability of our data. We will describe, first, the methodological approaches to both rounds of site visits. Second, we cover procedures used for selecting the 16 regular Head Start programs visited in the fall and the 36 programs visited in the spring. In addition, criteria and procedures for the identification and final selection of the six exemplary Head Start programs and the 10 preschool enrichment programs will be presented. In parts three and four, we describe observer training, field visits, and our analysis of the data. Finally, in part five, we will present our views on the representativeness of the sample of 52 regular Head Start programs and the generalizability of the findings discussed in other sections of the Task III report.

Methodological Approaches to the First and Second Rounds of Site Visits

The methodological approaches to the first and second rounds of site visits differed substantially. In

the fall of 1973 the visits were much more exploratory and open-ended than they were in the spring. Participant observation was the principal technique used for obtaining data in this first round and, in accordance with this approach, interview guides were developed for the field observations. These provided a basis for collecting information around 11 areas of inquiry at the grantee, delegate agency, and center levels including:

(a) Experiences of handicapped children prior to their entry into Head Start

(b) Identification, recruitment, and enrollment processes

(c) Assessment and diagnosis

(d) Delivery of services to handicapped children and their families

(e) Plans for handicapped children after Head Start, in public schools or with other community agencies

(f) Start-up and planning activities of programs after the mandate

(g) Integration of typical and handicapped children in classroom settings

(h) Involvement of community agencies and public schools

(i) Involvement of parents in the handicapped effort

(j) Staffing, staff training, and technical assistance

(k) Costs in serving handicapped children in Head Start

In addition, data about approximately 50 case study children were complied.

Basically, the same approach was used in our visits to the nine regular Head Start experimental projects.[2]

There were several reasons that we selected a more open-ended approach for the fall visits. Two considerations that were uppermost in our minds at the time of the research design development were the following:

1. At the time of the first round of visits, Head Start staffs had just started their program year and were only in the beginning stages of identifying, recruiting, and enrolling children who were thought to have special needs. It was unreasonable to have expected that staffs

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[2]Among the experimental projects we differentiated between those who attempted to develop special methods for the regular Head Start programs (nine visited in the first round) and those who had a more primary role of providing technical assistance (two visited in the first round and three in the second). In the latter case, our inquiry was mainly focused on the special nature of the experimental effort.

would have completed evaluations of children, have had time to develop adequate services, or have collected much information about costs, unless they had a good deal of prior experience. Thus, we decided that it was inappropriate to use a highly specific, structured interview and observation approach.

2. Our second concern was related to our own limited knowledge about Head Start programs and the importance of certain areas of inquiry that we planned to explore during the site visits. More specifically, even though at the outset of the study we had identified some key areas for in depth assessment during the field work, the full dimensions and components of each of these areas were still open questions. We needed an approach that would enable us to make judgments about some of these issues.

Based on our findings from the first-round visits, we defined several issues and areas of inquiry that we wanted to study in greater depth in the second round of visits. As we have already mentioned in Chapter I, these were mainly related to questions about serving more severely disabled children. For example, in those programs who had enrolled severely handicapped children, we wanted to evaluate how well these children were being served and

what factors seemed to enhance the development of high-quality programs. By comparison, in those programs where very few severely handicapped were included, why were these children not enrolled? The questionnaire subsequently developed for the second round was designed to collect data at the program level, child case study information, and classroom observations that addressed each of these issues.

Program-level information, the first of the three major sections of the questionnaire, was collected from Head Start directors or personnel responsible for the handicapped effort at the grantee or delegate agency. We inquired about 14 areas of interest including:

(a) Background information about program notification of the mandate

(b) Attitudes toward serving mildly, moderately, and severely handicapped children in Head Start

(c) Program definitions of handicap, diagnosis, and prescription

(d) Past experiences in serving handicapped children

(e) Staff resources, i.e., current personnel and new staff added for the handicapped effort

(f) Community resources, i.e., agencies currently serving handicapped children and the nature of those provisions

(g) Provisions for financing the handicapped effort

(h) Physical facilities

(i) Training and technical assistance

(j) Program planning for the effort

(k) Recruitment and enrollment procedures

(l) Relationships with other Head Start programs and Regional OCD Offices

(m) Self-evaluation of capabilities to serve mildly or moderately and severely handicapped children

(n) Leadership-management effectiveness of the Head Start director, as perceived by the field observers.[3]

In the second part of the questionnaire, information about three, and sometimes four, handicapped children was obtained from teachers and other center-level personnel.[4]

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[3]This section was eventually dropped from the final analysis because several of the observers felt that they did not have an adequate basis for such judgments from brief discussions of two to three hours.

[4]These data were collected in only 26 of the 36 programs reportedly serving handicapped children at the time of the initial sample selection. Observational data and child-specific information were not obtained in programs that were initially selected as having no handicapped children.

In general, we covered seven areas of inquiry about each of the 74 case study children finally selected. These were:

(a) The nature and severity of handicapping conditions

(b) Identification, enrollment, and assessment

(c) Classroom plans and programming

(d) Special services received outside the classroom

(e) Parental involvement

(f) Observed changes in children since enrollment in Head Start

(g) Plans for next year, i.e., Head Start, public school, or other special arrangements

The third part of the questionnaire dealt with classroom observations and teacher behaviors. On the basis of two three-hour observations per class, we assessed nine dimensions of classroom instruction, teacher-child, and child-child interactions. Part of this analysis also involved determining those differences in the delivery of services for typical and handicapped children, reasons for special arrangements, and making some judgments about the responsiveness of children in integrated Head Start settings.

Given these variations in approach to the first and second rounds of visits, the nature of the data collected in the fall and spring differed considerably. In the first round, there was a primary emphasis on qualitative information, and lengthy reports were written about each program visited. Data from the second round was much more quantitative in emphasis, with closed-ended responses that were supplemented with descriptive, anecdotal comments.

Selection of Programs

Our selection of the 52 regular Head Start programs in the fall and spring were largely determined by the respective purposes of the first and second rounds of visits. In particular, the following design features of Task III were given utmost consideration in developing the sampling scheme:

1. In view of the more open-ended, process approach of the first round and the structured interview approach of the second, we agreed that fewer programs should be visited and studied more intensively in the first round than in the second. Taking into account the total of 50 visits to regular Head Start programs budgeted for in Task III, staff available to conduct the field work, and the early stage of

the [illegible] effort in the fall when we visited programs, we decided that approximately 15 sites should be visited in the fall and about 35 in the spring

2. In contrast with the first round, major interests in the second round dictated that we select at least two groups of programs in the spring (i.e., those who had enrolled fairly large numbers of severely handicapped children and another group who were serving fewer or no handicapped children). At the beginning of the study in the fall, we wanted to know, in general terms, how the handicapped effort was proceeding in each of the 16 programs we visited. Thus, we selected only those who indicated that they had enrolled a significantly large number of handicapped children. On the other hand, our visits in the spring focused on questions of how well and why certain programs were able to serve more seriously disabled children.

Selection of Regular Head Start Programs Visited in the First Round

In accordance with the two design features described above, 16 regular Head Start programs were selected for the first round of visits. Fifteen of these were selected in a stratified random manner from the 10 regions of the Office

of Child Development. The last program was selected from the group of available Indian and Migrant programs. Procedures for the selection of this program will be discussed later. The following procedures were used in drawing the sample of 15 regular Head Start programs.

The sampling frame used for the selection of the 15 programs was the "Master Grantee Listing" of full-year Head Start programs, compiled and updated during our visits to Regional Offices during August and September, 1973. Of the information included in this listing, two were identified as stratification variables:

(a) Region, in which the program was located

(b) Size of the program, measured in terms of total full-year enrollment.

The distribution of Head Start programs according to their size was studied further in order to arrive at a few size clusters. Two criteria were used during the clustering process. These were:

(a) To use, as much as possible, the natural breakpoints in the frequency distribution for arriving at the clusters

(b) To approximate equal numbers (i e., equal percentages of total national enrollment) of children in each cluster.

This p[illegible] four-size clusters which were used during sampling. These are presented in Table 1 below.

TABLE 1

FOUR CLUSTERS USED IN SAMPLING OF REGULAR HEAD START PROGRAMS SELECTED FOR THE FIRST ROUND

Size Cluster	Number of Programs	Enrollment Range	Percent of Total National Enrollment
I. Small programs	602	1- 200	22 1
II. Medium programs	321	201- 400	26.3
III. Large programs	94	451-1000	24.0
IV. Extra large programs	32	1000+	27.6
Total	959		100.0

In view of the purposes of the first round visits and the fact that little information about numbers of handicapped children enrolled in each of the 959 programs was available, the following procedures were utilized to implement a two-stage sampling plan and arrive at the final 15 programs.

1. A stratified random sampling of 50 programs was selected. This was done in the following way. First, programs were assigned probabilities of selection based on

their size. [illegible] was divided into sample quotas for each size cluster, based on the percentage of total enrollment in each cluster. Third, cluster quotas were further distributed into regional quotas, on the basis of the regional distribution of the numbers of programs in each cluster. This procedure yielded the regional and cluster quotas of Small, Medium, and Large programs presented in Table 2. In the case of the 14 Extra Large programs selected, no assignments were made to the regions. Instead, the 14 programs were selected individually from the 32 because of the size of the variance of the enrollment figures of programs in this cluster. Finally, for Small, Medium, and Large programs, the required numbers of sites in each region-size cluster group were selected randomly from the available programs.

2. Telephone interviews were then conducted with each of the 50 programs to determine the number of handicapped children enrolled and the extent of the program involvement with the handicapped effort. Programs with no or very few handicapped children were eliminated and given no further consideration; there were 17 such sites. The final selection was made from the remaining 33 programs. Eight who seemed to be more advanced than the others in

TABLE 4

DISTRIBUTION OF HEAD START GRANTEES (TOTAL POPULATION AND SAMPLE) SELECTED FOR THE FIRST ROUND OF VIS I

Region	Cluster I: Small				Cluster II: Medium				Cluster III:			
	Population		Sample		Population		Sample		Population			
	#	%	#	%	#	%	#	%	#	%		
1	54	8.9	1	9.1	11	4.8	1	7.7	1			
2	58	9.6	1	9.1	8	3.5	1	7.7	2			
3	60	9.9	1	9.1	17	7.4	1	7.7	1			
4	94	15.6	1	9.1	69	29.9	3	23.1	4	37.5	3	
5	114	16.9	2	18.2	39	16.9	2	15.4	4	33.3	1	
6	68	11.3	2	18.2	43	18.6	3	23.1	28	29.2	3	
7	39	6.5	0	0	14	6.1	1	7.7	1	1.0		
8	40	6.6	1	9.1	5	2.2	0		1	1.0		
9	33	5.5	1	9.1	20	8.7	1	7.7	8	8.3	1	
10	42	7.0	1	9.1	5	2.2	0	0	2	2.1		
Total	602	100.0	11	100.0	231	100.0	13	100.0	94	100.0	12	4

DISTRIBUTION OF HEAD START GRANTEES (TOTAL POPULATION AND [illegible] SELECTED FOR THE FIRST ROUND OF VISITS

Stratum	[illegible]	[illegible]	[illegible]
Sample	[illegible]	[illegible]	[illegible]
%			
9			
9			
9			
9			
8			
8			
0			
9			
9			
9			
0			

[illegible] were chosen first as part of the sample of 15. To complete the process, I examined the remaining 45 programs and selected seven that yielded a relatively even regional distribution and fill quotas previously established for each of the four clusters.

Among the 15 programs selected, the Head Start director of only one refused to allow site visitors. This program, randomly selected from the sample of 33 sites, was replaced with another in the same size cluster and same region.

Information about programs in the 10 regions of OCD was not consistently available for all Indian and Migrant programs. For this reason, we decided to select only one Indian or Migrant program after consultation with the staff of the Indian-Migrant Program Division of OCD. This resulted in the identification of four Indian and two Migrant programs. These were subsequently interviewed by telephone to collect data on the extent of their handicapped involvement. One of the Indian programs who appeared to be more heavily involved with handicapped children was then selected for a first-round visit.

Selection of Regular Head Start Programs Visited in the Second Round

Thirty-seven regular Head Start programs were originally selected for the second round of visits. Thirty-four of these were distributed among the 10 OCD regions; three were Indian programs. The three-stage sampling process of the second round involved these procedures:

1. In contrast with that of the first round, the sampling frame used for the selection of programs in the second round was the total universe of 1,353 grantee and delegate agencies who had responded to the Task II full-year survey of this study, conducted from September to November, 1973. This population represented an approximate 80 percent return of the questionnaires sent to all Head Start programs in the fall. We might add, that even though 20 percent of the programs were not represented in this group, telephone interviews with the non-respondents following return of the questionnaires seemed to indicate that they did not differ significantly from the 80 percent who had returned the questionnaires.

The first step of the sampling process involved obtaining a distribution of the 1,353 programs by percentage

of severely handicapped enrolled and size of programs. The decision to use severely handicapped as a major stratification variable rather than total enrollment of handicapped children was largely based on the fact that the key issue of this study, from its inception, has concerned the inclusion of more seriously impaired children.

Let us consider, first, the stratification of programs into clusters by enrollment of severely handicapped children. It was obvious early in the sampling process that, in order to address the inclusion-exclusion question, we needed one group of programs that reportedly served no handicapped children. Second, to make meaningful comparisons among groups of programs, at least two additional clusters were required. This second decision was followed-up with a search for natural breakpoints in the enrollment figures among the 1,191 programs reportedly serving handicapped children. After examination of the questionnaire data, we finally split the programs into clusters I and II on the basis of a determining point of 3.5 percent enrollment of severely handicapped children. Thus, cluster 1 included those programs serving 3.5 percent or more severely handicapped children; cluster II included those programs with an enrollment of less than 3.5 percent

severely handicapped (i.e., programs serving mildly and moderately handicapped children); and cluster III consisted of those programs serving no handicapped children. Table 3 presents the distribution of programs by size and handicapped enrollment.

Stratification of programs by size involved a more complicated process. Basically, we explored two alternatives before arriving at the most satisfactory solution. First, we considered the possibility of dividing the programs by thirds so that each cluster would include 33 percent of the programs; this option was discarded because of the large proportion of small programs included in the sample with this procedure. A second possibility involved splitting the programs so each of the clusters included approximately equal percentages of handicapped children enrolled. This second option was also eliminated since so few large programs were included with such a procedure. A more workable solution to these problems was finally reached in a compromise between options one and two.

TABLE 3

DISTRIBUTION OF TOTAL UNIVERSE OF HEAD START PROGRAMS BY SIZE AND HA
ENROLLMENT USED IN THE SELECTION OF PROGRAMS FOR THE SECOND ROUNI

Handicapped Enrollment / Size	Programs Reporting No Handicapped Children Enrolled	Programs Reporting Handicapped Children Enrolled	
		Severely Handicapped Less Than 3.5 % of Total Enrollment	Severely Ha capped 3.5% More of Tot Enrollment
Small (1-120)	128	566	133
Medium (121-300)	22	281	48
Large (Over 301)	11	144	15
Total	161	991	201

TABLE 3

N OF TOTAL UNIVERSE OF HEAD START PROGRAMS BY SIZE AND HANDICAPPED
NT USED IN THE SELECTION OF PROGRAMS FOR THE SECOND ROUND VISITS

Programs Reporting No Handicapped Children Enrolled	Programs Reporting Handicapped Children Enrolled		Total
	Severely Handicapped Less Than 3.5 % of Total Enrollment	Severely Handicapped 3.5% or More of Total Enrollment	
128	566	138	832
22	281	48	851
11	144	12	172
161	991	201	1,325

The third and final alternative yielded the following groups:

TABLE 4

CLUSTERS USED IN THE SELECTION OF A [illegible] HEAD START PROGRAMS FOR SECOND ROUND VISITS

Size Cluster	Number of Programs	Enrollment Range
Small	832	1-120
Medium	351	121-300
Large	170	300+

2. For the purposes of selecting the 74 case study children of the second round, additional screening criteria were applied to all programs reporting handicapped children enrolled. They were:

(a) For programs in which the number of severely handicapped was less than 3.5 percent of total enrollment, we required representation of at least three handicapping conditions--each disability category having at least two mildly or moderately impaired children.

(b) For programs in which the number of severely [illegible] conditions, again each with disability category having at

TABLE 5

DISTRIBUTION OF NUMBER OF HEAD START PROGRAMS WHICH MET THE SCRE
CRITERIA BY SIZE AND HANDICAPPED ENROLLMENT

Handicapped Enrollment / Size	Programs Reporting No Handicapped Children Enrolled	Programs Reporting Handicapped Children Enrolled	
		Severely Handicapped Less Than 3.5% of Total Enrollment	Severely Handicapped 3.5% More of Total Enrollment
Small (1-120)	128	76	6
Medium (121-300)	22	149	14
Large (Over 301)	11	100	6
Total	161	325	26

TABLE 5

UTION OF NUMBER OF HEAD START PROGRAMS WHICH MET THE SCREENING CRITERIA BY SIZE AND HANDICAPPED ENROLLMENT

Programs Reporting No Handicapped Children Enrolled	Programs Reporting Handicapped Children Enrolled		
	Severely Handicapped Less Than 3.5% of Total Enrollment	Severely Handicapped 3.5% or More of Total Enrollment	Total
128	76	6	210
22	149	14	185
11	100	6	117
161	325	26	512

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least two severely impaired children. Table 5 presents the distribution of Head Start programs [illegible] the screening criteria by size and handicapped enrollment.

Finally, two additional factors were taken into account at this second stage of the sampling process. First, we wanted to achieve, as much as possible, an adequate representation of handicapping conditions. Second, we tried to obtain adequate representation across regions.

Thus, with these factors in mind and the constraint that we could visit no more than a total of 37 programs in the second round, we selected the final sample. From a total of 161 programs reporting no handicapped children enrolled, we randomly selected 10 sites for cluster III. From the 325 programs serving mildly and moderately handicapped children, we first randomly selected 25 percent of the programs in each of the size clusters, then selected 15 programs that appeared to include all regions and handicapping conditions. In cluster I which included programs enrolling severely handicapped children, only 26 remained after the screening criteria were applied. Thus, we were unable to use any random sampling procedures;

instead, we again selected programs on the basis of distribution across region and representation of handicapping conditions.

3. The third stage of the sampling process involved telephone interviews to each of the 37 programs selected. These served the purposes of verifying representation of the particular handicapping conditions of children for whom programs were selected and confirming final arrangements for visits with Head Start directors. As a result of these interviews, four programs were dropped from the sample because of field arrangement problems. These programs were replaced by new sites in the same regions.

In addition, one program withdrew two days before our visit as a result of scheduling difficulties and unanticipated commitments. Since many programs were drawing close to the end of the school year, we decided not to select another site at that time.

Modification of Program Clusters of the Second Round

The selection scheme described above seemed initially to be workable and, further, offered the prospect for making some important comparisons between programs that were and were not serving handicapped children. This plan, however, was eventually modified

for purposes of analysis in view of the large discrepancies between first reported numbers and actual enrollments of handicapped children determined during the site visits. Put somewhat differently, there was such variance between handicapped enrollments which were reported in the full-year survey of these programs[5] and actual enrollments of handicapped children observed on-site, the project team had concern that our analysis could have been highly questionable if based on these cluster groups. For these reasons, we reorganized the 36 programs into the following clusters:

(a) Cluster I including programs with enrollments of 4.5 percent or more severely handicapped children

(b) Cluster II serving mildly and moderately handicapped children in programs which met one or both of the following criteria: enrollments of some severely handicapped children (up to 4.4 percent); enrollments of many mildly and moderately handicapped children (10 percent or more)

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[5]These figures were also verified by Head Start directors during the sampling process.

[illegible]

second [illegible].

[illegible] II represent[illegible] [illegible]

[illegible]

[illegible]

children [illegible]

Th[illegible]

(b) second, programs had integrated classroom settings or were characterized by integration components that involved placement of handicapped children in "normal" community settings.

The non-Head Start "model" preschool programs were selected on the basis of several sources of information. In order to compile a master list of potential candidates we first called a few key persons with the Bureau of Education for the Handicapped and the Office of Child Development and asked for recommendations. We also talked with several people who were knowledgeable about programs for preschool handicapped children; these persons included professionals with the Council for Exceptional Children, university personnel, and the directors of two experimental projects visited in the fall and spring. From these recommendations we then developed a list of approximately 200 federal, state, and privately sponsored projects. About [illegible] programs were subsequently called and, on the basis of the information we obtained about the nature of the population served, the degree of integration, and the total set of services provided, we selected 10 sites.

The six regular Head Start exemplary projects were identified in a different manner. Of the 38 programs of

the second round sample, only 14 in cluster I serving severely handicapped children qualified for initial consideration. These programs were then rank-ordered in terms of their degree of integration of severely handicapped children and overall program quality, and the top six were selected as exemplary programs.

Observer Training and Field Visits

The Task III site visits were conducted in the fall and spring by professionally trained graduate students from Syracuse University and Boston University, university professors of special education,[6] and other members of the project team. In total, 20 persons participated in the field visits over the course of the year, with 16 observers involved in the fall and 10 in the spring.

In accordance with the purposes of the field visits, observer training and our approach to visits in the fall differed substantially from those in the spring. For

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[6] Three professors were part of the project team of this study and held positions at Syracuse University. The other two, who served as Senior Consultants to the project, were on the faculties of Boston University and Indiana University.

example, observer training for the first round was spread over a longer period of time (approximately two months), was much more "process" centered in terms of training the observers in techniques of open-ended interviewing, and devoted considerable time to providing the field staff with information about Head Start. The two-month training period of periodic meetings in Syracuse and Boston was concluded with three days of intensive discussion and review of the observation guide with six members of the project team and all field staff present. After the more formal training phrase, all observers made pilot visits to experimental programs or additional sites not included in the sample. Upon their return, the field staff met again for a full-day session to discuss their observations and work out any problems that they had encountered in the field. Visits that followed ranged from two to four days per site, and in most instances, were made by two observers. A "typical' visit involved conversations with Head Start directors on the first day, followed by discussions with teaching staffs, parents, coordinators of the handicapped effort, and other relevant Head Start personnel. We also completed at least two classroom observations per site

Training of the observers for the second round of visits, conducted over a one-week period, was much more structured in approach. The first phase of training involved two-day sessions where two members of the project team and a consultant from the Department of Special Education of Rhode Island College met with field staff and reviewed the field instrument. These meetings were followed-up with three days of formal classroom observation with Part III of the questionnaire. Six observations were made in three carefully selected preschool and special education settings that represented a range of early childhood education philosophies from open education to highly structured, teacher-directed classes. During this segment of the training, one member of the project team served as the "criterion observer." The consultant provided interpretation of observer differences and assisted in analyzing results. Given the high degree of agreement that was achieved on most items of the observation schedule (i.e., between 75 and 85 percent), the project staff was able to proceed with confidence that observations in the Head Start classes would have a common basis for interpretation.

Visits to programs in the second round were completed over a six-week period. In contrast with those of

the fall, they were made on a "round-robin" basis so that observers remained in the field for two to three weeks at a time and traveled to several sites in one geographic area. Programs reporting no handicapped children were visited for one day; two to three days were spent in those with handicapped children. With the exception of five Head Start programs and one exemplary project, each site was visited by only one observer. Finally, and again in contrast with our approach to the first round, data were collected and reported on questionnaire response forms at the time of the site visits.

Analysis of Data from Visits to Regular Head Start and Experimental Programs

The considerable differences in the kinds of data collected in the first and second rounds dictated different procedures for analysis. In the fall, the task at hand required careful scrutiny and interpretation of the data of lengthy reports. Major themes and hypotheses about key areas such as parent involvement, integration, and involvement with community agencies were determined with the combined efforts of four members of the project team. These were later discussed among the entire staff who had been involved in the field operations. These and other

hypotheses formed the basis for tentative impressions and preliminary findings which were presented in the Interim Report submitted to the Office of Child Development in February, 1974. We might add, at this point, that for a great majority of the findings reported mid-year, there was almost unanimous agreement among the observers on the validity of the observations with respect to the programs they had visited.

Data from the second round, by comparison, required both quantitative and qualitative analyses. With regard to the quantitative analysis, we obtained the following:

1. Frequency distributions of all discrete variables of the program level, child-specific, and observational data

2. Crosstabulations between cluster groupings (i.e., I, II, III) and selected program-level variables

3. Transformations of selected variables, i.e., composite scores for: attitudes toward serving the mildly handicapped and severely disabled, perceived capabilities of programs to serve handicapped children, severity levels of handicapping conditions of case study children, and quality scores

4. Correlations

(a) Attitudes of directors and total enrollment of handicapped children, enrollment of mildly and moderately

disabled children, and enrollment of severely disabled children

(b) Perceived capabilities and total enrollment of handicapped children, enrollment of the mildly and moderately handicapped, and enrollment of the severely disabled

(c) Composite quality scores obtained from classroom observations and cluster groupings, attitudes of program directors, perceived capabilities to serve handicapped children, and percentages of handicapped children enrolled.

The anecdotal information was analyzed separately. By program, these data were taken off the questionnaires and typed, question by question, on separate index cards. Responses were later sorted and analyzed by two members of the project team, knowledgeable about procedures of qualitative analysis. They subsequently compiled reports about each of the key areas of inquiry of the questionnaire which included comparisons of responses of programs in each of the cluster groupings. As we will describe in Chapter IV, such analyses were extremely important in illuminating some critical differences among those programs who were and were not serving severely handicapped children.

Generalizability of the Data

Generalizability of the data from visits to regular Head Start programs was an important question for the first round. Likewise, it is important for the second. Simply put, the major issue is this: From the [illegible] variance in Head Start programs across the country, what degree of confidence can we place in the findings, and are generalizations be made about the handicapped effort on the basis of the 52 site visits? The issue obviously requires consideration of several factors. However, all taken into account, we think that there is reasonable justification for concluding that key conclusions can be drawn confidently.

First of all, while the programs selected for both rounds of visits are not necessarily representative of the total population of Head Start programs, we have no reason to believe that these sites differed in any substantial way from those not included in the sample.

Secondly, while we regarded our findings from the first round to be tentative--because of the small sample and the early stage at which sites were visited in the fall--our observations from the second round, almost without exception, supported the major impressions from the fall

and have led us to basically the same conclusions about the status of the handicapped effort.

Finally, we need to address the issue of key differences that we found between programs in the second round that were and were not serving severely handicapped children. Our observations in those programs serving more disabled children are perhaps more representative of other such sites who also provide services for more seriously impaired children. For example, the programs in cluster I, in general, seemed to be differentiated from programs in cluster II in terms of greater individualization of instruction, more parent involvement, and more meaningful relationships with community agencies. On the other hand, we do not believe that these differences weaken the strength of our observations which so consistently revealed similar patterns of events across all programs we visited over the course of this first year of the handicapped effort in Head Start, and therefore, our confidence in the generalizability of the findings to other Head Start programs.